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SEVENTH CONGRESS OF THE UNIVERSITIES OF THE COMMONWEALTH

1953

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Reports of Proceedings of the Home Universities Conferences held annually from 1946 to 1952. 1*s.* 6*d.* each (1951, 2*s.*; 1952, 2*s.* 6*d.*) post free. 1946 and 1950 Reports out of print.

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SEVENTH CONGRESS
OF THE
UNIVERSITIES OF THE COMMONWEALTH
1953

Report of Proceedings

THE ASSOCIATION OF UNIVERSITIES OF
THE BRITISH COMMONWEALTH
1954

Editor of Congress Proceedings

J. F. FOSTER, M.A., LL.D.

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PREFACE

The Congress recorded in these pages is the Seventh Quinquennial Congress of the Universities of the Commonwealth. The series began with the first Congress of the Universities of the Empire held in London in 1912, when it was agreed that similar meetings should be convened at quinquennial intervals by the Universities Bureau of the British Empire (now the Association of Universities of the British Commonwealth) which was then set up; and although world events prevented the exact fulfilment of this programme four further Congresses were held in the inter-war period, viz. in 1921 (at Oxford), in 1926 (at Cambridge), in 1931 (at London and Edinburgh and in 1936 (at Cambridge). The first post-war meeting took place in 1948 at Oxford as the sixth quinquennial Congress of the Universities of the Commonwealth; it was there agreed to affirm the principle of holding major academic gatherings every five years, but also to introduce the practice of having smaller representative meetings on an executive committee basis at more frequent intervals and of not necessarily holding these or the major Congresses in the United Kingdom. It was contemplated that the next Congress might be held in Canada, but as discussions developed on this point at the executive meetings held in Canada in 1949 and in New Zealand in 1950 (which were confirmed at the one held in India in January 1952), it became clear that universities in most countries would find it less difficult to send full delegations to Europe than to North America in 1953, and after consultation with the inter-university bodies in the various parts of the Commonwealth (including the Committee of Vice-Chancellors and Principals of the Universities of the United Kingdom), the Executive Council of the Association of Universities of the British Commonwealth decided that the project for a Congress in Canada should be postponed until 1958 and that the seventh Congress should be convened in 1953 in the United Kingdom.

An invitation was received from the Council of the Senate of the University of Cambridge that the Congress should be held at Cambridge, and the Warden of the Durham Colleges in the University of Durham offered to accommodate in the week previous to the Congress a meeting of the heads of universities. These offers were accepted by the Executive Council which in March 1951 set up a Congress Organizing Committee to make the arrangements for the meeting; it comprised besides representatives of the Association three members appointed by the Committee of Vice-Chancellors and

Principals, as well as the Vice-Chancellor and Registrary of the University of Cambridge and the Warden of the Durham Colleges, and under the Chairmanship of Sir Philip Morris this body laid and carried out in the following two years the plans for the programme of the Congress. The names of the Committee are now set out on p. iv.

In August 1951 the Congress Organizing Committee communicated its preliminary plans to the 114 universities and university colleges in the Commonwealth (whether members of the Association of Universities of the British Commonwealth or not), and invited them to suggest topics for discussion at the sessions of the Congress. From the suggestions received in response to this letter and from others made at the meeting of the Executive Council of the Association in Madras in January 1952, the Congress Organizing Committee drew up a list of subjects for the programme of the Congress; this was sent to each university in August 1952 with a request that it should appoint a delegation of up to four, or in certain circumstances five, members to represent it at the Congress. In the end 101 institutions in the Commonwealth appointed representatives. In addition, the Congress Organizing Committee, following the practice at previous Congresses, asked various learned societies and kindred organizations to send observers to the Congress, but new ground was broken on this occasion by a decision to invite the Association of American Universities to participate in the meeting by nominating ten members to represent the Universities of the United States (though previous Congresses had been attended by individual observers from particular American institutions). The attendance of the representative party of American University Presidents, who were invited as a result of these nominations, was a special feature of the 1953 Congress. With its total of 404 members, it is the largest yet held of the series.

This Congress was also attended by a greater number of 'executive heads' of universities and university colleges than any previous gathering, a special appeal having been made to secure the presence in a university's delegation of its Vice-Chancellor, President or Principal. It was decided to follow the precedent established in 1948 of holding in the week previous to the Congress a meeting of the heads of the various member institutions of the Association of Universities of the British Commonwealth; this took place on 6–10 July 1953 at Durham, when seventy-five Vice-Chancellors and Principals attended as well as the secretaries of the inter-university bodies in the various countries. This meeting was a private one and its proceedings have not been printed, but they included a certain amount of informal discussion of the arrangements for the Congress itself and of its programme. The members lived during the week at

St Mary's College, and the meetings took place each day in the Appleby Lecture Theatre of the Durham Colleges. On the evening of Wednesday, 8 July, a University Congregation was held in the Hall of Hatfield College when the Chancellor of the University of Durham conferred honorary degrees on Dr T. Alty, Vice-Chancellor of Rhodes University, South Africa; Dr W. A. Mackintosh, Principal of Queen's University, Canada; Sir A. Ramaswami Mudaliar, Vice-Chancellor of the University of Travancore, India; Professor S. H. Roberts, Vice-Chancellor of the University of Sydney, Australia; and Dr J. E. Wallace Sterling, President of Stanford University, U.S.A.; after which the members of the conference dined in the Great Hall of Durham Castle as guests of the Council of the Durham Colleges. On the evening of Thursday, 9 July, they were entertained to dinner in Newcastle by the Council of King's College. The Durham meeting ended on Friday, 10 July.

Members of the Congress assembled in Cambridge on Monday, 13 July. The Congress itself was opened in the Senate-House, Cambridge, on the afternoon of 13 July by its President, Marshal of the Royal Air Force Lord Tedder, as Chancellor of the University of Cambridge, a Congregation being held at the same time to confer honorary degrees on H.R.H. the Duchess of Kent, and on six of the visiting overseas delegates. After the ceremonies the University held a reception in the Old Schools.

Each day of the Congress, the morning was devoted to a discussion of general interest, and a second deliberative session was also held in the afternoon or evening, the set topics being 'Government and Universities', 'Administration and Academic Duties', 'Academic Mobility in the Commonwealth', 'Higher Technological Education', and 'Admission and Selection of Students'. Each session was presided over by a chairman chosen from the different Commonwealth countries in turn, and was opened by three or four speakers who had been previously invited to do so by the Congress Organizing Committee after considering suggestions from the inter-university bodies of the various countries; a brief summary of each proposed address had been printed in the programme as a guide to members who wished to join in the ensuing debate. Two sessions were also concerned with a symposium on the general question of 'What subject or subjects today are best fitted to fulfil the role played previously in the university curriculum by the Classics?', the different answers to which were dealt with by eight opening addresses and a number of speeches from the floor of the conference. The afternoon of 15 July was devoted to an Extraordinary General Meeting of the Association of Universities of the British Commonwealth, which its constitution requires it to hold during a Congress to

receive a report on and to review its activities during the quinquennium.

The business meetings were interspersed with functions of a less formal kind, the members of the Congress being entertained at a series of parties throughout the week in the University and the Colleges. Luncheon parties were given by Clare, Girton, Gonville and Caius, St Catherine's, Selwyn, Pembroke, Christ's, Queens', Jesus and Emmanuel Colleges and by Peterhouse, Trinity Hall and Madingley Hall; and garden parties were held at King's College, Downing College, Newnham College and Madingley Hall. By courtesy of the Provost and Fellows, the Association of Universities of the British Commonwealth entertained members of the Congress at two luncheon parties at King's College, and the authorities of Corpus Christi College made its dining hall available on the final day for a luncheon party of the Executive Council with the visiting American Presidents. On the last evening of the Congress the whole Congress was entertained at a notable series of dinner parties given in their respective halls by St John's, Trinity and Sidney Sussex Colleges.

The programme was planned to give delegates opportunities for informal discussions with each other, and also to enable them to obtain impressions of life at Cambridge during the 'long-vacation term', both from personal contacts with members of the University and from participation in the official visits that were arranged for the Congress to the University Library, the Cavendish Laboratory and the Engineering Laboratory. Apart from those who wished to live privately or to stay at hotels in Cambridge, all members were accommodated (those from overseas as guests of the Association) in the various colleges and were treated as members of the respective High Tables during the Congress.

The Chancellor of the Exchequer, the Rt. Hon. R. A. Butler, M.P., did the Congress the honour of giving in person one of the opening addresses at the session on 'Government and Universities', and Her Majesty's Government entertained the members at a cocktail party at Magdalene College on 15 July, the guests being received by Mr J. A. Boyd-Carpenter, M.P., Financial Secretary to the Treasury.

After the Congress dispersed on Friday, 17 July, many members took advantage of the invitations which had been collectively extended to them to visit universities and university colleges in the United Kingdom. In some cases universities had arranged functions for particular dates on which visitors were asked to come, in others the calls were made on an individual basis, but throughout the summer, both before and after the Congress, the delegates from the

Commonwealth and the United States were welcome visitors in the home universities. At Southampton, Aberdeen, St Andrews, Glasgow and Edinburgh Universities the opportunity was taken of the presence in the country of representatives from overseas universities to include particular members of the Congress among the recipients of honorary degrees at their annual conferment ceremonies, but the only honorary degree ceremonies specially held in connexion with the Congress were those at Cambridge and Durham.

The travel of so many representatives from their own countries to Britain would not have been possible without the financial assistance which the Association was able to offer its participating member universities from a fund generously furnished by two foundations, the Imperial Relations Trust and the Carnegie Corporation of New York. In certain cases of course a university was able to appoint some of its delegates from members of its staff or governing body who were visiting Britain in any event, but in the case of a senior member of the academic staff or the executive head of the university his attendance at the Congress could sometimes only take place as an *ad hoc* visit, the cost of which the Association by virtue of this generous assistance was able to defray. The consequent presence at the Congress and participation in the discussions of the majority of the people mainly responsible for the formulation and execution of academic policy in the several countries of the Commonwealth was a worthy result of this expenditure.

Reference is made in the text to the many other organizations and persons who contributed to the success of the Congress. Its secretariat was provided by the staff of the Association of the Universities of the British Commonwealth, who maintained close liaison throughout the period with the Registrary of the University of Cambridge, whose office discharged the arduous undertaking of co-ordinating the local arrangements and the extensive hospitality programme of the Cambridge Colleges. Outside the academic field much appreciated assistance was given to delegates' ladies staying in Cambridge by the English-Speaking Union, and the commissariat problem at both Durham and Cambridge was lightened by gift consignments sent from well-wishers in the food-producing Dominions and Colonies. The following pages place on record the effort in promoting the success of the meeting made by those members who took an active part in its deliberations.

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The Congress proceedings for each session are reported in the succeeding pages in the following order: the names of the opening speakers; the summaries of their addresses as set out in the programme; the opening addresses as actually delivered; and the verbatim record of the subsequent discussion. Certain papers which were under consideration at various sessions are printed in appendices at the end of the volume.

REPORT OF PROCEEDINGS

Monday, 13 July

OFFICIAL OPENING OF THE CONGRESS

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OFFICIAL OPENING OF THE CONGRESS

By MARSHAL OF THE ROYAL AIR FORCE LORD TEDDER
Chancellor of the University of Cambridge

Before the official opening of the Congress, a Congregation was held for the conferment of Honorary Degrees on H.R.H. THE DUCHESS OF KENT and on the following members of the Congress:

Dr BASHIR AHMAD, Vice-Chancellor of the University of the Panjab (Lahore).

Dr H. R. DEW, Dean of the Faculty of Medicine and Professor of Surgery in the University of Sydney.

Dr F. CYRIL JAMES, Principal and Vice-Chancellor of McGill University.

Dr S. RADHAKRISHNAN, Chancellor of the University of Delhi.

Dr H. R. RAIKES, Vice-Chancellor and Principal of the University of the Witwatersrand, Johannesburg.

Dr J. WILLIAMS, Principal of Victoria University College, University of New Zealand.

An Honorary Degree was to have been conferred on Dr W. W. GRAVE, Principal of the University College of the West Indies, but he was unable to attend on account of illness.

MARSHAL OF THE ROYAL AIR FORCE LORD TEDDER: At a time when fission is so fashionable, not only in physics but also in education, in politics—and in Empires—it is a refreshing change to encounter an activity working in the opposite direction. At least I hope I am right in assuming that one of the main objects of the Congress we welcome here is not to try and put the clock back, but to try and fit all the pieces into a complete pattern, to work towards a unity based not on uniformity but on completeness, to look beyond the trees to the wood as a whole.

Though in the broadest sense my own education will I hope never cease, in the technical sense I received my education in a different era; conditions, problems and methods were very different from those of the present day. But since then I have had very good opportunities of watching the changes in education from the touch-line and frankly there have been times when I have felt sorry for the younger generation.

I have no doubt that many of you are familiar with the story of the Chinese gentleman who, on the collapse of a Dynasty, managed to secure the services of a maid who had served in the Imperial kitchen. In pride he invited his friends to come and partake of a dinner cooked by one he thought to be an Imperial cook. As the appointed day approached he asked the maid to prepare an Imperial dinner. The maid replied that she couldn't prepare a dinner. 'What did you do then?', he asked. 'Oh, I helped to make the patties for the dinner', she replied. 'Well then, make us some Imperial patties.' 'Oh, I can't make patties, I specialized in chopping onions to go into the stuffing to go into the Imperial patties.'

Now I am quite sure that the technique of chopping the Imperial onions called for a high degree of specialized skill. Equally I fully appreciate that there are hundreds of activities in modern life—not only in the scientific field—which call for highly specialized knowledge; but somehow I wonder where it is all leading. Of course I realize at once that you gentlemen attending this Congress are yourselves living proof that it is possible to be a specialist and also have the broad view of things as a whole. But with all respect to you I suggest that you are not as young as you were, and what has been possible for you may not be quite so possible for the younger generation. Specialization gets more and more intense every year—that seems inevitable. Isn't it going to become more and more difficult for the specialist to keep his sense of proportion, to see things as a whole? Are our educational methods, is our society, going to be able to keep pace with this problem and help the individual to a fuller life instead of becoming a human termite? Is there not more and more danger of these specialist subjects becoming closed shops—closed shops, moreover, in the sense of narrow prisons from which the young specialist cannot escape?

You may say I am being alarmist—I've been told that before. All I would add is that sometimes the man on the touch-line sees things the players don't see, and I don't believe any of us can afford to be complacent on this issue.

My role now is the simple but honourable one of welcoming to Cambridge those of you who are attending the Congress of the Universities of the Commonwealth. I do so heartily and sincerely on behalf of this University.

Would that the man who has often and aptly been called the father of the Commonwealth were still with us and able himself to greet you with words of wisdom and welcome. The desk at which I am standing, and which is now being used for the first time, is a memorial to that great man, a gift to the University from Christ's College in memory of Field Marshal—or as he preferred to be called—General Smuts,

sometime undergraduate, scholar and honorary fellow of Christ's College, Chancellor of the University. It was his vision which has so largely inspired the development of the Commonwealth.

I cannot and would not presume to try and guess what he would have said had he been standing here now, but at least we can, I feel, be sure he would be in hearty support of this Congress and its purpose. After all, with the opportunities it affords for the exchange and the pooling of special knowledge and widely varied experience and the steps one hopes it will be able to take to further that exchange throughout the Commonwealth, it is a practical move towards that ideal of wholeness which lay so close to his heart.

May your meetings here be enjoyable and fruitful, provocative of thought and productive of action, and may the spirit which is Cambridge make its own contribution to your work.

Each one of you individually is welcome, all of you collectively are welcome—heartily and sincerely welcome. While you are with us we would have you feel at home.

Sir PHILIP MORRIS (*Chairman of the Congress Organizing Committee and of the Association of Universities of the British Commonwealth*): I must first on behalf of all the visitors to Cambridge congratulate Her Royal Highness the Duchess of Kent on having chosen today to receive her doctorate. We regard it as most fortunate that it should have been today.

You, my Lord and Chancellor, have in language of no obscurity to some extent repeated what the Public Orator, I have no doubt, was trying to say. You have taken this occasion not only to welcome us but to say something to us. If education in the modern world has more problems to contend with than it had when you yourself were at school, something must also be said about the extension of knowledge.

My duty is briefly but sincerely to express the gratitude of the Association of Universities of the British Commonwealth for the privilege of meeting in Cambridge and for the welcome which you have voiced to us this afternoon. Five years ago, as soon after the end of the war as could be contrived, the Association organized a Congress of the Universities of the British Commonwealth. In that year the executive heads of the universities which are members of the Association met in Bristol, and the full Congress met in Oxford. Since then the Executive Council of the Association has held meetings in Canada, New Zealand and India, and a meeting of the executive heads of universities was held last week in the congenial and hospitable atmosphere of the Durham Colleges. Now today the whole Congress returns to Cambridge, refreshed by its world-wide tour, to pick up

the threads of the university affairs of the Commonwealth which were dropped in Cambridge in 1936.

Once more history is being made. The Association has invited to participate in this Congress the presidents of ten universities of the United States of America, representing the Association of American Universities. This initiates a new phase of co-operative and constructive activity between these two associations of universities.

In the interval since 1936 Cambridge seems scarcely to have changed her face, and certainly not at all to have changed her heart. We have received this afternoon the warmest of welcomes from the whole University. We are receiving every possible kindness from the colleges. Not only are they extending hospitality to visitors from the Commonwealth and the U.S.A., but they are also placing at the disposal of the Association some of their facilities.

You have referred, my Lord, to the important purposes for which the Association and the Congress exist. The discussions which are to take place this week will make manifest beyond reasonable doubt the vital importance of free universities in the modern world. In this era national and international economies, industry, society, the social services and civilization itself depend upon knowledge and upon its application to the problems of the modern world. Never has it been so important to ensure that knowledge is itself preserved from contamination, from whatever quarter contamination may come. In all ages, I suppose, searchers after truth have been beset by lets and hindrances, which in some ages have been great and in others less great; but in all ages the preservation of knowledge uncontaminated has depended on the continuance of academic freedom, freedom from interference from governments, from politicians, and most of all from dictators of any kind. If now in the time in which we live this academic freedom is itself in peril from any quarter, associations of universities and congresses of this nature help to strengthen the bastions against interference, from whatever source that interference may come. Furthermore, and perhaps more important still, discussions over such a wide range of subjects as are taking place this week will help to ensure that the defence which is put up against interference with academic freedom does not itself damage the cause which it seeks to secure.

It is because the Association of Universities of the British Commonwealth exists primarily for such purposes, and because it is undoubtedly unique in the extent to which it is comprehensive and representative of universities springing from a wide variety of races, creeds and climes, that I believe that this Association has a great and important function to discharge.

You, my Lord and Chancellor, have bid us welcome, and for that

I express on behalf of the Association our gratitude. This University has honoured some of the representatives of universities at home and abroad, and for that too the Association is heartily grateful. You have wished the Congress every success in its deliberations, and for that I express the gratitude of the Association. I am sure, however, that every member of the Congress knows that our thanks to the University of Cambridge can best be shown by ensuring that the deliberations of this week are, as you have said, profitable and such as will lead to useful action.

Tuesday, 14 July

GOVERNMENT AND UNIVERSITIES

ADMINISTRATION AND ACADEMIC DUTIES

SESSION ON GOVERNMENT AND UNIVERSITIES

Chairman: DR W. A. MACKINTOSH
Vice-Chancellor and Principal of Queen's University
and ex-President of the National Conference
of Canadian Universities

Opening speakers:

DR N. A. M. MACKENZIE (*President of the University of British Columbia*)

THE RT. HON. R. A. BUTLER (*Chancellor of the Exchequer, United Kingdom*)

DR HAROLD W. DODDS (*President of Princeton University*)

DR E. G. MALHERBE (*Principal and Vice-Chancellor of the University of Natal*)

SUMMARIES OF ADDRESSES

The following summaries provided by the opening speakers were printed in the Congress programme:

(*a*) DR N. A. M. MACKENZIE

This topic must be dealt with in terms of the increasing need in the modern university for larger revenues because of the costs of education and research, particularly in science and the professional schools. The present sources of revenue include the fees paid by the students, income from endowments, gifts, donations and grants made by private citizens, business companies and corporations, foundations and trusts, alumni and alumnae, and governments at various levels—municipal, provincial, state, federal or central. Because of the nature of our contemporary world and societies, the inevitable trend in most countries, with the possible exception of the United States of America, has been towards a greater participation by and dependence upon governments in respect of university finances and revenues; this, because of the increased costs mentioned above, and the heavy taxation in the form of both income tax and succession duties made necessary by reason of wars, defence budgets and the

growth in public and social services. In addition, the control of monetary policy by governments is related to, if not directly responsible for, interest rates, the real value of currency, in terms of inflation and deflation, and other matters which vitally affect the funds available to universities. The concern of the universities because of the necessity of maintaining reasonable freedom in respect of teaching, writing, research and the general conduct and operation of university affairs is the extent to which their dependence upon government assistance involves or carries with it government interference in and control of the affairs of the university. This may be either direct intervention or indirect influence because of the purposes for which the government subsidies and grants are given. All of this must be considered and discussed, however, with the full realization of the place that the universities occupy and the part that they play in the communities, societies and nations of which they form a part.

It is clearly unrealistic to imagine or expect that universities can live and operate apart from or outside their societies and without regard for their governments. The universities do serve their communities, are the products of those communities, and are certain to be influenced and shaped by them as well as exerting, one would hope, some influence upon them. The direct control exercised by governments may be through the withholding of money, by determining the purposes for which it will be spent, by participation in the government of the university itself, by interference with appointments, by investigations of the operations of the university and, more particularly, of the activities, opinions and behaviour of the teaching staff, and by general intimidation. The indirect influence and control is mainly through the making available of large sums of money for certain departments or work within the universities which are of interest and assistance to the government.

At the present time, nearly all governments are contributing large sums to the natural and physical sciences and to applied research, while the humanities and the social sciences get very little aid for purposes of research or of a specialized kind. Because our relationships with governments are likely to become closer and our dependence upon them to increase, the only sensible and practical way of dealing with this problem is through education—the education of the public, of legislators and of governments, about the proper functions of the universities, about the contributions that they can and should make to their communities and to their governments, and about the importance of freedom to them in respect of this—freedom in the sense that the 'authority' or the 'expert' must have freedom if he is to function effectively, and, more important,

freedom to discuss, to explore, to investigate and to experiment in and with new fields of knowledge, new ideas, new concepts, even when these may be questionable, unpopular and seemingly heretical. This particular freedom is freedom of investigation rather than freedom to propagandize or indoctrinate. In a democracy where we all to varying degrees give lip service at least to this idea, the conditions under which a university operates, the nature and extent of its freedom will depend very largely upon the maturity of the democracy, upon the level of education of the people composing it, upon the extent to which the universities educate the citizens, both about citizenship and about the place and part and functions of a university and society. The 'ivory towers' may have been possible in certain periods of history and in certain forms of society. However desirable they may be today, they are difficult to justify in a truly democratic society in which the funds for their maintenance are provided by the taxpayer.

This is the kind of general setting in which I would describe very briefly our Canadian experience. From the earliest days, some of our universities have been dependent for part of their revenues upon governments, others have relied upon the support of religious denominations, and still others upon private benefactors. Since World War I, the federal government has been subsidizing research and the training of research workers in the universities through the agency of the National Research Council and certain other government departments. Following World War II, very large amounts were provided by the federal government to assist in the education of ex-service personnel. The newly created Defence Research Board and the Atomic Energy Committee have added to the funds available for research in specialized fields, and the federal authorities are participating very extensively in medical research and in certain aspects of medical training. Two years ago, as a result of representations made by the Canadian universities and on the basis of the recommendations of the Royal Commission on National Development in the Arts, Letters and Sciences, the federal government made available general funds for the support of higher education in Canada on the basis of population. At the present time, this is fifty cents per capita.

This has raised in a rather acute form the question of the provincial control over education and federal interference in that field, and, in one province, it has brought the provincial government directly into this controversy. Generally speaking, however, the Canadian universities have been remarkably and agreeably free from any direct interference in their affairs by any of the governments interested or concerned, though, unquestionably, the balance between the sciences

and applied sciences versus the humanities and social sciences has been directly and seriously affected by government contributions to the university finances. The contributions by industries and even by private citizens have also been larger for these 'practical' fields than for the academic ones. The problem is a serious one. I will include in my paper some detailed information about the extent of government participation in university affairs in so far as Canada is concerned, and will conclude by suggesting that I believe the government subsidies are necessary and desirable, but that they should be made, as far as possible, without any strings attached, to be administered by the universities themselves at their discretion. Where regulation or control seems necessary or is exercised, this is better done by a body similar to the University Grants Committee in Britain rather than through direct government, political or departmental control.

(*b*) THE RT. HON. R. A. BUTLER

The relations between government and universities are now recognized in all countries to set a problem of peculiar difficulty. It will be considered why this should be so, and the solution adopted in this country will be described. The expenditure which the universities must meet if they are to do their duty by the modern state far exceeds what they can meet from fees and endowments. Before the war one-third of university income was drawn from the state; now it is two-thirds. It is normal that the state finance should involve state control. On the other hand state control may involve political interference and may even endanger freedom of thought.

The history of state grants to universities in Great Britain will be traced, leading up to the first appointment of the University Grants Committee in 1919. This Committee is appointed by the Chancellor of the Exchequer, after consultation with the Minister of Education and the Secretary of State for Scotland, and reports to him. Its terms of reference, composition and method of operating will be described. Every five years the Committee visits all the universities, and calls upon them for estimates of their needs for the next five years. It then makes a confidential report to the Treasury on the aggregate needs of the universities for the next five years. On the basis of this report the Chancellor of the Exchequer decides and announces how much money he will ask parliament to provide for recurrent grant over the next five years. The Committee then recommends to the Treasury how this money shall be distributed, and the Treasury do not question the distribution recommended. During the five years 1947–52 some of the recurrent grant was earmarked for particular fields of study, but for the present quinquennium these earmarked grants have been merged in a single block grant to each university,

which it is free to spend as it will. Non-recurrent grants are also made for capital expenditure. During the present economic difficulties it has not been possible to put these grants on to a quinquennial basis. The government decide annually the capital resources to be made available for the various fields of investment, one of which is the universities, and within the amount allocated for universities as a whole the choice of capital projects to be put in hand has been left to the University Grants Committee.

(c) PRESIDENT H. W. DODDS

Higher education in America, by which we mean colleges and universities (degree granting institutions), is divided between heavily tax-supported institutions on the one hand and wholly privately supported on the other. Although in number the tax-supported comprise only one-third of the total, they accommodate about half of the two million students enrolled in our 1800 colleges and universities spread over the land. As a nation we are unequalled in quantity of formal education available; the quality, as you know, is far from uniform.

So diverse and 'unplanned' is our system that one must be selective in any brief discussion of any aspect. So I shall confine my observations and opinions chiefly to the relation of the government to the so-called private university as represented in the Association of American Universities which you generously invited to be represented at this Conference.

First, I may say that our Association is a highly selective group of only thirty-seven universities; about half being publicly and the other half privately supported and managed. The state universities as a group derive the great bulk of their income from the taxpayers by vote of the state legislatures, although they receive some funds from the federal government and still more from the modest fees charged to students. The private institutions may be said to receive no governmental moneys except under contracts for special research and development programmes, usually of a fundamental nature, mostly in science and technology, as an element of our national defence programme. Such contracts (one cannot properly assimilate them to grants) have increased radically since the recent war; they raise some troublesome problems as yet unresolved, and involve a new relationship to our national government for both the state and the private universities.

Of course our two general types of universities have their different aspects, growing out of the nature of their support and control. But the universal judgement is that both are working for the same cause; that each is good for the other and that each needs the other. I think

you will observe from the behaviour of your American guests that we live in friendly harmony and mutual respect.

The growing sentiment for federal government aid to both state and private universities and colleges raises new and portentous problems. The reasons for federal financial assistance are familiar. The state universities are confronted by the dwindling tax capacity of the states, as the federal government monopolizes more and more the sources of taxation common to both, and the growing demands of other state welfare agencies for a larger share of the state tax dollar in accordance with the needs of the welfare state. Of course costs of operation have mounted for all, public and private alike. Our private universities are suffering, as yours have, from the heavy taxation of private wealth and the drying up of traditional sources of income from gifts and bequests. Nevertheless, many of us believe that they have still a unique function and hope that means will be found to continue them free of the governmental control that federal tax support would entail.

The chief reasons which lead us in the private universities to distrust federal aid and to wish to remain independent may be summarized as follows:

(1) Federal support will certainly entail political control. For us the exhortation that federal aid must come innocent of any governmental controls is a most unrealistic piece of wishful thinking. Based on the experience of federal aid in other fields, the control over the years would be increasingly detailed as to both policy and operation.

(2) There is no possibility that we can duplicate the experience of the University Grants Committee. It is not exportable to America. Americans who anticipate an easy transfer of the University Grants Committee principle to our situation overlook the differences between the two countries in national attitudes towards the universities in respect to scope and function, not to mention the radical differences in the habits and methods of the Treasury and Exchequer systems of the two.

(3) The time is not ripe with us for a national policy on higher education. Diversity, experimentation, adaptation to local conditions are still essential in a country of such wide variations, both regional and cultural.

(4) The private universities are needed to preserve a healthy element of private enterprise in higher education. Their autonomy gives them a freedom to determine their curricula, qualifications of admission and standards of scholarship, without being called on the carpet by Congress or an educational bureaucracy that would undoubtedly develop in Washington, in accord with our national proclivities. The popular pressures to train in 'practical' subjects

have been resisted more easily and successfully in the leading private universities. It is no accident that they have provided to date the most favourable atmosphere for the liberal arts, the 'useless' subjects.

(5) The private universities serve as an indispensable bulwark and advocate of academic freedom because they are not subject to political rewards and punishments. The truth of this statement has been demonstrated anew in recent months which have been featured by governmental investigations, both state and national.

(6) Finally, we oppose the philosophy which motivates many of those favouring federal aid to both state and private institutions. A Commission on Higher Education appointed by President Truman in 1946, composed of some prominent educators and equally eminent laymen, recommended that by 1960 a minimum of 4,600,000 young men and women should be enrolled in universities and colleges beyond the secondary level; on the theory that 49 per cent of our population can profit from two years of general education at college level, and 32 per cent have the mental capacity to entitle them to further liberal or professional education. The programme called for federal appropriations of $2,000,000,000 annually—a sum which has since become totally inadequate under our inflated price level.

While this proposal has not been implemented in any degree, it did evoke a great deal of favourable editorial comment; and it has elicited the strong support of a goodly number of the leaders in our state public school systems. To accomplish it calls for a radical regimentation and watering down of the content of the traditional college curriculum, which was criticized as being too oriented 'to the intellectual'. According to this school the modern under-class curriculum should pay chief attention to 'skills other than intellectual'. In fact, mental proficiency was listed last among the eleven objectives which the new, universal college system would achieve during the freshman and sophomore years.

Is it strange that many of us, whether we are identified at present with private or state universities or not, view such a philosophy of subservience to government with a fear approaching horror? Government aid on such terms would be a national disaster. It would really amount to an offer of bribery and many of us do not want even to be tempted, for we might fall. If it is not to prevail ultimately, it will be in substantial measure because of the freedom of private institutions and their alumni and friends to resist it.

(*d*) DR E. G. MALHERBE

Increase of Government Assistance to Universities and Relations between Governments and Universities: Notes on Universities in The Union of South Africa

A. Amount of increase since the war

The figures on *current* expenditure (excluding capital expenditure*) for the eight teaching universities are, in round figures, as follows:

	(*a*)	(*b*)		(*c*)	
		Total current expenditure by universities		Government grant for current expenditure (excluding capital)	
Year	Number of full-time students	Total	Per student	Total	Per student
1945	14,000	£1,500,000	£107	£640,000	£46
1951	18,000	£2,500,000	£139	£1,300,000	£72

Since the war the percentage of the government grant to total current expenditure by universities has grown from 43 to 52 per cent.

Though the absolute increase in the government's assistance seems considerable according to the above figures, it should be discounted by the following considerations:

(*a*) the decrease in the purchasing value of the £;

(*b*) the relative proportion of the state's budget devoted to universities. Before the war the percentage which the university grant constituted of the total state budget was about 1½ per cent, in 1951 it was only about 1 per cent. In other words, the government's provision for universities did not develop *pari passu* with the needs of a young and rapidly developing country. This is an important consideration, particularly for universities in the Dominions.

B. Old basis of government subsidy

(i) *For capital expenditure:*

£-for-£ grant on approved buildings.

(ii) *For running costs:*

Roughly *£-for-£ grant on current income*, i.e. from fees, endowment, recurrent donations, etc. (This is the average rate. Actually the rate of subsidy worked on a sliding scale, ranging from £2 per £ to 10*s*. per £ up to a ceiling which severely handicapped the larger universities.)

* Government grants towards *capital* expenditure on buildings in 1945–6 were about £25,000; in 1952–3 about £200,000.

This was the position until 1949 when government grants were pegged for a period of three years. In consequence nearly all universities showed large deficits. There were rising costs, salaries had to be kept at an inadequate level and development was curtailed.

C. Relation of government aid to autonomy

The universities protested and a *Government Commission to Enquire into University Finances and Salaries* was appointed in 1951. One of the terms of reference of this Commission was to devise 'a basis on which the State should subsidize the universities, having regard to *the freedom and autonomy of universities as statutory bodies and at the same time to the necessity of safeguarding the State against unrestricted financial obligations*'.

When government aid is based upon *income*, there is usually less need for specific control by the government than when the university grant is based upon a university's *expenditure*. Nevertheless, despite their operating on the £-for-£ subsidy formula, South African universities have been subject to government control in respect of the creation of new posts and the salary scales offered. One reason for this control is the fact that all incumbents of permanent posts must participate in the Universities' Provident Fund, to which the government contributes. The universities also have to obtain the Minister's approval when making outside loans, e.g. for capital needs, particularly when they already are working under a deficit.

It should be noted that this government control, though irksome in many ways, was designed as a means of restricting the government's commitments and not primarily to interfere with a university's autonomy in respect of academic freedom. The Charters granted to universities by Act of Parliament entrench this fairly strongly. Recently, however, certain Ministers of the present Government have in public utterances indicated that the government may, by withholding funds, interfere with a university's right to decide which students it should admit. This right is specifically entrenched in the various university Acts. These may, however, be altered by parliament.

D. The Commission's new formula

The Commission set itself the task of harmonizing the autonomy of the university with the necessity to safeguard the state against unlimited financial obligations. It proposes to do so by means of a formula.

It has, however, also set up a small University Grants Commission to deal with situations which are not adequately covered by

the formula. Though a statutory body, its functions will be mainly advisory.

The University Finances Commission realizes, however, that 'there are sections of the work of a university which cannot and should not be placed in the confines of the straight-jacket of a formula. These should be left to discretionary decisions, in some cases of the university authorities, in others of an impartial outside body. The financial proposals which we elaborate in this report are based on these two methods of approach, viz. (*a*) subsidization by formula wherever this appears to be feasible, and (*b*) provision for discretionary decisions where divergences are desirable in the national interest....We do not propose to safeguard the State by a system of departmental control of universities. The solution must be sought elsewhere.'

In order to provide for flexibility it proposes to divide the field into two sectors: (*a*) In the first there would be a *basic subsidy* and a standard provision in respect of which the state's share would be closely defined by formula and by certain special discretionary provisions. (*b*) In the second there would be a *free income* over which the university would have freedom of disposition. This latter would define its ability to go beyond the fields which the government subsidizes in the first sector; but the university would be held responsible for living within its means, and it would require the approval of the Minister only for launching out into new faculties and creating basic departments other than those on a prescribed list. This is necessary 'because every objective formula postulates a measurable basis and every measurable basis, whether it be student numbers or fees or classes attended, is capable of manipulation to give the optimum subsidy. It is important in any subsidy basis that the balance between the freedom of the university and the financial obligations of the state should be properly maintained. To leave the universities free to create demands on the Treasury in proportion to "student numbers" without adequately defining the latter term would leave the door wide open for horizontal expansion into fields of questionable academic status'.

Constitution of the formula

The needs of a university for teaching and research up to and including the Master's degree will be provided for by the state on a formula which comprises the following constituents:

I. *Basic subsidy*, i.e. to make provision for certain teaching departments in each of its approved faculties, irrespective of student numbers (£1400 per department).

II. *Standard provision in relation to student numbers:*
This is worked out on a separate formula for different faculties in such a way that the law of diminishing returns applies.

III. *Specific needs:*

(*a*) Administration	12½ per cent of II.
(*b*) Library needs	£7 per full-time student.
(*c*) Laboratory needs	£15 per laboratory-using student.
(*d*) Maintenance needs, etc.	25 per cent of II.

IV. *Cost of living allowances.*

V. *Standard fee ratio:*
This is a correction according to a fixed ratio which gives an amount to be deducted from the total government grant. Each university would be at liberty to charge any fees that it liked. For subsidy purposes it is assumed to have raised the amount demanded by the 'standard fee ratio', namely 20 per cent for smaller institutions and 35 per cent for institutions with more than 3000 students. If it raises less than this amount, it will be the loser; if it raises more, it will have more free income.

A sum of money will be placed at the disposal of the University Grants Commission to subsidize work beyond the Master's level, particularly research. In this respect there will be liaison with the Council for Scientific and Industrial Research and with the National Council for Social Research.

Conclusion

This is in broad outline the position which the South African universities are facing today. If the recommendations of the Commission are adopted, we can look forward to considerable improvements both in salaries and in general development. Seeing that a former Secretary of the Treasury (who always kept the universities very short) was Chairman of the Commission, there is a reasonable chance that the Treasury may accept the recommendations.

In many ways this statement is incomplete. But it is difficult to be concise when describing such a complex and rapidly changing situation without running the risk of being either inaccurate or platitudinous.

OPENING ADDRESSES

Sir PHILIP MORRIS (*Chairman of the Association of Universities of the British Commonwealth*): In the difficult circumstances in which the Chancellor of the Exchequer finds himself, he may be a few minutes late.

I should like to record my very warm thanks to the chairmen who will officiate at the sessions of the Congress as they occur, and first of all to Dr Mackintosh, who will now take charge of the proceedings.

The CHAIRMAN (Dr W. A. MACKINTOSH): The subject of this session is 'Government and Universities'. I hope that it is characteristic of universities that they can turn so quickly from the pomp and circumstance of our opening session yesterday to this practical and indeed earthy topic. I find nothing in the programme or in the synopses of the papers which indicates that our concern is the welfare of the government; it seems to be primarily ways and means of conducting universities.

We are fortunate in having as opening speakers in this discussion—and I understand that it is hoped that this will be a discussion and not merely a series of papers—men with a wide variety of experience in the relations of universities to governments. Those relations depend to some extent on the nature of governments, to some extent on whether they happen to be unitary or federal governments, and to some extent on the political history of the particular country concerned. Each of those who are to speak to us has his own special experience and his own special contribution to make.

As Sir Philip Morris has indicated, the order of speakers in the programme has been somewhat modified, and I am going to call first on Dr N. A. M. MacKenzie, who is the head of what we in Canada call a provincial university, which is not what you in this country call a provincial university but is what our friends from the United States of America call a state university. Dr MacKenzie has also been a member of a commission which laid the foundation for federal assistance to universities, and he therefore speaks with a special background and authority.

Dr N. A. M. MACKENZIE (*President of the University of British Columbia*): It is great pleasure to me, as I am sure that it is to everyone else here, to have this opportunity of returning or of coming for the first time to Cambridge. My first introduction to Cambridge was almost exactly twenty-nine years ago, in July of 1924, when I came

as one of the Canadian delegates to the first Imperial Conference of Students. I mention that because our distinguished guest this morning, Mr Butler, the Chancellor of the Exchequer, was at that time representing Cambridge, and he took, as he proposes to take today, an important part in that conference and in those discussions. It is most interesting and encouraging to those of us who are engaged in university work, and particularly to those of us from the Commonwealth, to know that he has continued his interest in and support of the universities of the Commonwealth.

You will realize that I speak as a Canadian. What I have to say applies in the main to Canadian conditions and to Canadian situations and circumstances. While there may be some lessons to be learned from that experience and information, it should, I suggest, be kept constantly in mind that it is Canadian experience, and that it relates to conditions which are peculiar to our own country.

The relations of the universities with governments may in our case be with governments at the level of municipalities or of the provinces or of the federal state. I do not propose to take up any time in discussing our relations with the municipalities, the cities and towns in which we happen to be situated, and I do not propose to say anything about our relations with the provinces in which we are situated except that those of us who come from state or provincial universities try to get as much money as we can from our provincial governments with the minimum of interference or attempt at regulation on the part of those governments in our universities. It is about our relations with our federal government and relations with governments in general that I have a few things to say.

I approach that relationship in terms of our finances, in terms of the operation of the universities themselves in the sense of regulation and control, and in terms of the desirability of the maximum of freedom which university people should enjoy and must enjoy if they are to do the work which is expected of them.

The period in which we live and work is one in which universities need more money than they have had in the past or than most of them are getting at the present time. The increasing need in the modern university for larger revenues is due to the increasing cost of education and of research, particularly in science and in the professional schools, and also because of inflation and because of the effects of government policies on the dividends or rates of income from invested funds and because of government policies in respect of taxation.

Our present sources of revenue include the fees paid by students, income from endowments, gifts, donations and grants made by private citizens, business companies and corporations, foundations

and trusts, alumni and alumnae, and governments at various levels—municipal, provincial or state, federal or central. Because of the nature of our contemporary world and society, the inevitable trend in most countries, with the possible exception of the United States of America, has been towards a greater participation by and dependence upon government in respect of university finances and revenues. Because of the increased costs to which I have already referred and because of the heavy taxation in the form of both income tax and succession duties made necessary by reason of wars, defence budgets, and the growth in public and social services, this dependence is likely to continue. In addition, the control of monetary policy by governments is related to, if not directly responsible for, interest rates, the real value of currency, in terms of inflation and deflation, and other matters which vitally affect the funds available to universities. The concern of the universities, because of the necessity of maintaining reasonable freedom in respect of teaching, writing, research and the general conduct and operation of university affairs, is the extent to which their dependence upon government assistance involves or carries with it government interference in and control of the affairs of the university. This may be either direct intervention, or indirect influence because of the purposes for which the government subsidies and grants are given. All of this must be considered and discussed, however, with the full realization of the place that the universities occupy and the role they play in the communities, societies and nations of which they form a part.

I believe that it is unrealistic to imagine or expect that we can live and operate apart from or outside our societies and communities and without due regard to our governments. The universities do serve their communities; they are the product of them, and they are certain to be influenced and shaped by them as well as, I would hope, exercising some influence upon them. The direct control exercised by governments may be by the withholding of money, by determining the purposes for which it will be spent, by participation in the government of the university itself, by interference with appointments, by investigations of the operations of the university and, more particularly, of the activities, opinions and behaviour of the teaching staff, and by general intimidation. The indirect influence and control is mainly through the making available of large sums of money for certain departments or work within the universities which are of interest and assistance to the government.

At the present time nearly all governments are contributing large sums to the natural and physical sciences and to applied research, while the humanities, and to a lesser extent the social sciences, get very little aid for research or for work of a specialized kind. Because

our relations with governments are likely, in my opinion, to become closer, and our dependence upon them to increase, to me the only sensible and practical way of dealing with this problem seems to be by education—the education of the public, of the legislators and of governments—about our proper functions, about the contributions which we can make and that we should make to our countries and communities, and about the importance of freedom for us in respect of this; freedom in the sense that the person who, by reason of his training and experience, should know something about the matter in question, should be the best person to decide in normal circumstances on what he should do or what he should say or how he should conduct himself within the area of his special knowledge and experience. He should have the freedom to discuss, to explore, to experiment and to investigate, particularly in new fields of knowledge, in new ideas and new concepts, even when these may be questionable, unpopular and seemingly heretical. This particular freedom is freedom of investigation rather than freedom to propagandize or indoctrinate.

In a democracy in which we all give at least lip service to this ideal, the conditions under which a university operates and the nature and extent of its freedom will depend very largely on the maturity of the democracy, on the level of education of the people composing it, on the homogeneity of that people, and on the extent to which the universities are able to educate the citizens both about citizenship and about the place and part and functions of a university and society. 'Ivory towers' may have been possible in certain periods of history and in certain forms of society. However desirable they may be today, they are difficult to justify in a truly democratic society in which the funds for their maintenance are provided in the main by the taxpayer.

I should like to say a word about the universities of Canada. From the earliest days some of our universities have been dependent for part of their revenues on governments; others have relied on the support of religious denominations, and others on private benefactors. Since World War I the federal government has been subsidizing research and training of research workers in the universities through the agency of the National Research Council and certain other government departments. Following World War II, very large amounts were provided by the federal government to assist in the education of ex-service personnel. The newly created Defence Research Board and the Atomic Energy Committee have added to the funds available for research in specialized fields, and the federal authorities are participating very extensively in medical research and in certain aspects of medical training. Two years ago, as a result of representations made by the Canadian universities, and on the basis of the recommendations of the commission of which our chairman

has spoken, the federal government made available general funds for the support of higher education in Canada on the basis of population within the provinces. At the present time this is 50 cents per capita.

This has raised in a rather acute form the question of provincial control over education and of federal interference in that field, and in one province it has brought the provincial government directly into the controversy. Generally speaking, however, the Canadian universities have been agreeably free from any direct interference in their affairs by any of the governments interested or concerned, although unquestionably the balance between the sciences and applied sciences on the one hand and the humanities and social sciences on the other has been directly and seriously affected by government contributions to university finance. The contributions by industries, and even by private citizens, have also been larger for these practical fields than for the academic ones, and this has produced for all of us a serious problem.

For the rest, I have brought with me some detailed information about the nature and extent of the participation by the federal government in the work of the universities, but I propose to do no more now than to say that, in all, some ten departments of government are actively contributing or have for some years past contributed to work done at the universities or by university people. As with most of you here, following the war our government, through its aid to demobilized young men and women, spent very large sums of money—in our case over 130 million dollars on some 60,000 young men and women, who came to the universities. In no case do I know of any interference by the government, because of the expenditure of that money or the influence which it may have had on our young people. However, I think that it would be more useful if I were to stop now and to leave any further details or information, or any questions about the actual administration of moneys, either at the provincial or the federal level, to the discussion or to questions which may follow.

The CHAIRMAN: All of us, and particularly those of us who come from overseas, have followed with great interest the evolution over the past twenty odd years of the United Kingdom government's participation in university finance and the evolution of the University Grants Committee. It is therefore a very genuine assistance to those of us who come from overseas, as it is an honour and a privilege, that we are to hear the Rt. Hon. R. A. Butler, the Chancellor of the Exchequer, who has such a central position in this country, particularly in the matter of university grants.

The Rt. Hon. R. A. BUTLER (*Chancellor of the Exchequer, United Kingdom*): I feel it a great honour that you should have asked me to come here this morning and to take part in one of your business meetings. It would have been possible for me to get out of this Congress simply by attending the government cocktail party. I regret that I am unable to attend that party owing to the rather heavy duties which I have to perform at present, and my honourable friend the Financial Secretary for the Treasury will be there on behalf of Her Majesty's Government. I have the greater pleasure—greater at any rate to myself, as I have a rather snobbish preference for meetings as opposed to cocktail parties—to take part in your discussion this morning. I do so with great pleasure. I shall be short, because I understand there is a discussion to follow.

I should like to say at the outset, on behalf of Her Majesty's Government, how much we, quite apart from the university authorities, welcome you to this country. It so happens that I have the opportunity of coming to my own University of Cambridge to talk to you, so that I am indeed spoilt, but my official remarks on behalf of Her Majesty's Government are made to you as welcoming you to our country and to this Congress.

It is a great pleasure to me to meet Dr MacKenzie again. He is quite right in saying that we have worked together before. I am also glad to see again Dr Malherbe, who taught me a great deal on the occasion of the conference which we held together on Commonwealth matters in 1949. Also, I have very much enjoyed reading Dr Dodds's book,* and I shall have a rather damaging quotation to make from it in a few minutes.

You have asked me to say something about the relation of government and the disbursing of public money and the universities of this country. This is, of course, a major problem which potentially might lead to conflict in all countries, but in fact has been settled by adjustment and common sense, so far as I am aware, in almost every case. The state and the universities have both in recent times mercilessly increased the volume and scope of their activities. The government now deals, or attempts to deal, with every kind of problem, as I have been finding during the last fortnight myself. Quite surprising questions appear to come up to those who are in high positions. The employees of the state, it may surprise you to hear, must still be trained thinkers; there is no automatic or robot conception prevalent in Whitehall or in the many employees of the state throughout the country. They must still have a background of specialized knowledge

* *Government Assistance to Universities in Great Britain.* Memoranda, submitted to the Commission on Financing Higher Education, by H. W. Dodds, L. M. Hacker and L. Rogers (Columbia University Press, 1952).

which only the universities can provide. Similarly, the universities have developed enormously in scope and size, partly due to government action and partly to match the same general tendencies of society which have themselves reacted upon the activities of the government.

I think that the initial problem of the universities is to assimilate the growth of numbers and the growth of disciplines without losing a coherence in the general activities of university life. Your external problems in almost every country which you represent are to live unavoidably in a condition of financial dependence on the state without losing your own academic independence, a problem which sometimes arises in the best regulated families and is not always so well regulated as it is in this country by the University Grants Committee. The danger is not of a conscious oppression or parsimony by the government, but rather, in my view, of a gradual moulding into unnatural shapes of all your activities by the demands for particular researches or for the production of particular types of specialist.

Yet, even if that be the danger, namely, that your activities will be unnaturally moulded to this or that mould, never was there a greater need, at any rate looking at it from the point of view of the state, for the true university. Politicians by their nature are doers, or should be, and we found our actions on orthodoxies freshly proclaimed before each appeal to the country. These orthodoxies used to cover the narrow field formerly described as politics, but our orthodoxies and our field are daily becoming more comprehensive. We now have thrown into our midst the theological abstractions not only of finding a way through economics by finding anyone who will agree with anyone else on an economic subject, but also of this new orthodoxy of sponsored or commercial television, which I am sure will produce, in our country at any rate, controversies greater than the theologians of old were ever able to dream of.

In all this jungle, therefore, there is all the more need for a garden of learning and for men and women not cultivated by the politicians but growing things in their own garden, where thought is uninhibited and all orthodoxies are strictly questioned. Thus, the university's task is to cultivate its own garden, and the state's to supply the manure in useful form and quantities and to ask for the fruits in due season, not to pull up the plants by the roots before they flower.

But, of course, there are many varieties of gardeners, and here I come to Dr Dodds's book. On page 101 he indicates that it is a mistake to assume that all pressure for larger governmental influence comes from the left, and I should like to make one or two remarks about that in the time that is left to me. We have attempted, as I shall show when I go into the details of how we manage our grants, to

avoid any degree of governmental influence, as our predecessors have done; and I trust that, when our record comes to be written, it will be seen that we have maintained the traditions which they have handed down to us.

All of you present today, however, show a good example of different types of formal relationship. Our Chairman, Dr Mackintosh, represents the independent university receiving government help, and Dr MacKenzie the university founded by provincial legislation. Dr Malherbe represents a university founded by Union legislation, after a sojourn inside the University of South Africa, while Dr Dodds represents a wholly independent university, of which, like the American buffalo, there are very few at large.

In this country the formal position is something of a mystery to all; anybody would fail to understand it, except a specialist, but, as I have said, I hope that it works without oppression. The practical relationship involves the universities' request to the state for money, and the state's request to the universities for particular developments, and I will give you some examples in this country of particular requests by the state. Since the war, medicine, veterinary science, dentistry, agriculture, the social sciences, oriental languages and technology have each in turn been examined by a government-appointed body, and the universities have been asked to plan special developments. The universities have responded nobly, because development has proceeded by discussion and not by the issue of orders. I hope that the universities will always speak, and speak up, if the government presses too far in any direction; at the same time, there must be a two-way traffic of requests, which hitherto has worked satisfactorily.

The financial relationship presents a problem, as I have already indicated, which might lead to the questioning of academic independence. Our answer here is an individual one, and not necessarily for export. We give very large grants in aid to the universities, amounting this year to £27 million, with no detailed parliamentary control. This system grew up without a carefully laid plan. It grew up by a series of steps taken in the right direction by common-sense people sharing the same aims. We here in this country have the advantage of a comparatively small area of territory, which makes our problem manageable as a single whole. We are not a federal state, and we have no need to take account of different powers of state or province. Our system and our sense of myth and symbol centre on persons rather than written words. We have no law so sacred that it cannot be changed; even parts of Magna Carta are repealed from time to time without anybody noticing. We have few traditions which cannot be altered and no convenient form which cannot be erected into a tradition. This is the general spirit in which

we have kept our Commonwealth family together—and long may such a system continue, with the aid of the universities here present—the same system which has governed the government's relations with the universities. It rests on mutual confidence between parliament and executive, and between the executive and the universities.

This is where the University Grants Committee has provided the essential bridge between the state and the university. I dare say that some of you have had the opportunity to dip into the quinquennial report recently published by the University Grants Committee;* if not, I strongly recommend it to you as an exceedingly fine piece of work. It may surprise some of you in this audience who are connected with this report to know that I have actually read great parts of it myself, and that I am not speaking from a brief. I should like to congratulate the authors and bring it to the attention of this Congress.

This report indicates pretty well what has happened over the last five years, and the defects as well as the merits of university organization. I trust, now that the quinquennial grants enable us to look ahead for another five years, that at the end of that time a further report will be produced which will show that some of the defects have been remedied, but that the same spirit goes on.

I should like to pay a particular tribute to only one man, and that is Sir Arthur Trueman. If I pay tribute to him and not to others who are taking his place or to those who are doing so much work in the University Grants Committee, it is because we so much regret his premature retirement in September. There are few examples of the work of a single man who, by sheer quiet application and character and detailed knowledge of what is going on in the universities, has kept the situation right between the universities and the government throughout many difficult years.

I shall conclude with a few observations about my own modest functions, which fortunately are somewhat removed from the university field. I have first to decide the total grants, after receiving the recommendation from the University Grants Committee. Secondly, I have to put to the universities, through the University Grants Committee, the government's request for particular developments. I can then stipulate that sums should be used for certain purposes, but this must be used very sparingly as a method; indeed, there are no such earmarked grants at present, but they might be a suitable mechanism for starting or accelerating a particular development. But—and this is the important thing—once the purposes for which the money should be spent have been settled, I do not interfere in its division between different universities.

* *University Development: Report on the Years 1947 to 1952.* Cmd. 8875 (H.M.S.O. 1953).

This is where the work of the University Grants Committee is so vital to our system. I have, it is true, the last word, namely, that I could in certain circumstances refuse supply, but I would normally be content, as I have wisely been hitherto, with silence, or at any rate only a few grunts. It is most important, except for any earmarked grants and for any grants for capital works for particular projects, that money should be provided by the state for the general purposes of the universities; and that all block grants, excluding grants for capital works which we fix here annually, are furnished on a five-yearly basis, which gives an opportunity again for the independent use of the money.

So much for the system in its philosophical outlines and in its particular application. No one would claim that this system is perfect. We shall gain much by your criticism; an outside view would be most valuable to all of us. We are involved in the risk of being too much taken up in our own immediate tasks and work, and we may not see clearly what should be the aim of the good university, covering the whole life of man; and that should continue, with adaptations, over the course of decades and centuries, regardless of the passage of individual transient governments. Our circumstances may be different in this hall as between one another, but we all share the same aims, and I like to feel that you will find no place more propitious to your discussion and study than Cambridge, which Lytton Strachey once described as 'the home of poetry and common sense'.

The CHAIRMAN: We have heard some Canadian experience and an authoritative explanation of what goes on in the United Kingdom. I have now great pleasure in calling on Dr Harold W. Dodds, the President of this rare institution, Princeton University. It is a very great pleasure to have him with us.

Dr HAROLD W. DODDS (*President of Princeton University*): When Mr Butler announced that he was going to quote from my memorandum on the relation of government to the universities in Great Britain, I was again reminded of something that I should by this time, my hair being as white as it is, have learned long ago, and that is never to say or write anything that is going to appear in print. My only comment on his quotation is that my remarks which are to follow would be different if I thought that we could establish in America anything corresponding to the structure and spirit of the University Grants Committee.

My remarks touch a very controversial area at home and I want to make it clear at the start that they apply only to the United States. We are somewhat unique in this field of so-called higher education,

and anything that I may say about federal assistance—and my remarks will be largely restricted to federal assistance to our colleges and universities—applies only to us; it does not refer even to our closest neighbour, Canada, where the circumstances are widely different from ours.

I may be considered an unregenerate capitalist of a bygone age, but I do believe in our twofold system of state-supported and privately sustained universities, and I think that with reasonable diligence and skill on the part of our private institutions it can be maintained. I believe that each category has been good for the other, and I want to see our twofold pattern continue. Although in number the state tax-supported institutions comprise only about one-third of the total—how many institutions of higher education we have is debatable; the number is between 1500 and 1800, depending on how you define them—they accommodate about half of the nearly two million students enrolled in our colleges and universities. As a nation we are unequalled in the quantity of formal education available; the quality, as you know, is far from uniform. Some of our institutions of higher education call themselves universities—I do not know how many—which are not true universities. I know that the general impression abroad is that, with a few exceptions, our colleges and universities are not properly institutions of higher education at all. It is practically impossible to explain to a European the American undergraduate college; it must be seen and studied on the ground to be understood. Certainly our national pattern of higher education is not restricted to the education of an elite class in the ways of scholarship, but this is not to say that it does not serve a useful purpose in our society or that we cannot boast of some universities worthy of the name. I think that we can, and I submit that the group of thirty-seven which comprise the Association of American Universities, representatives of which you have so generously invited to attend this Congress, are proper universities.

I shall not do more than mention the state universities, because there are presidents of eminent state universities here who are far more qualified to discuss their problems than I am. Briefly, about half of the income of the forty-eight state universities comes from the taxpayers of the state, and the balance in part from the federal government (largely for agricultural education and research), and in part from modest fees charged to students—quite modest in comparison with what the private institutions require. The private institutions, for their part, may be said to receive negligible government moneys, except under the new development of formal contracts for research and development programmes, mostly in science and technology, as an element in our national defence programme. These

contracts—I do not believe that one can properly assimilate them to grants—have increased rapidly since the recent war. They raise new and difficult problems for all of us which are as yet unresolved; but I shall not digress to consider them.

Our two general categories of universities—public and private—have their own individual characteristic aspects, growing out of the nature of their support and control; but the universal opinion is that both are working for the same cause, that each is good for the other and that each needs the other. I think you will observe from the behaviour of your American guests that these two types do live in friendly harmony and mutual respect. I will go further and say that we like each other.

The pattern of our state universities is well established. American politics, popular views as to the function of the university, and popular demands on our universities being what they are, I believe that our state institutions have maintained a commendable integrity and independence, though they do operate under a system of legislative oversight more detailed and direct than anything that the British universities know or have experienced in relation to the University Grants Committee or Parliament. But the degree of independence achieved has not been by accident, and I venture to say that the presence of a competitive system of privately sustained universities has been a substantial factor in attaining and maintaining their position.

In the United States the new and portentous problems of government relations relate primarily to proposals for general and substantial federal assistance to both state and private colleges and universities. While expanded federal aid would, of course, spell greater dependence on Washington on the part of the state universities, the heaviest impact would fall on those which at present are privately sustained. My remarks from now on will be directed to the question of federal assistance to the institutions which have heretofore been privately sustained.

The reasons arguing for this new type of federal assistance are familiar ones; they are common to us all, and I shall not take time to describe them. Those of us who oppose federal assistance consider that privately sustained universities still have a unique and indeed an indispensable function to perform, and that ways can be found for continuing them as a substantial representative group on the basis of private financing and control, without the governmental control which any sizeable federal tax support will bring in its wake. It may turn out that the economic situation will prove too tough for many of our several hundred private colleges and universities. Already the signs point to a considerable willingness, even eagerness, on the part

of some of our private institutions for federal aid, although it is always insisted that the grants must not entail any political control from Washington. Nevertheless, I venture the hope that a goodly number will be able to endure and prosper, for the foreseeable future at least, without government support. One must except medical education, which is becoming so costly with us, as with you, as to lead many to believe that the only hope is in some form of federal assistance, though there has been a good deal of discussion and disagreement about how that assistance should come. Some insist that it be on some formula which will remove administrative discretion from Washington entirely—so highly do we regard our educational bureaucrats!

Obviously the private institutions to survive must find new sources of revenue, or, more correctly, exploit old sources to a greater degree. Everyone in our country agrees, I think, that large gifts and endowments are rapidly becoming a thing of the past. However, many of our privately sustained universities are fortunate in that their graduates are pretty well conditioned to giving to Alma Mater, and smaller gifts from many people rather than large gifts and endowments from the few must be a significant part of our fiscal programme of the future. Gifts from business corporations are beginning to appear as a new source of income. The attitude of many corporations towards gifts for research in the university, and more recently for general operations, has been growing more liberal and less restricted as to purpose. More than half our states have in recent years passed laws to release corporate boards of directors from their traditional legal liability in respect of gifts to public welfare purposes which cannot establish a *quid pro quo* for the corporation.

Let me sum up the considerations which lead many of us to prefer to remain independent of federal aid. If precedent in other fields of federal participation means anything at all, aid from Washington would alter the character of the private institution. So far as the United States is concerned, the exhortation that federal aid to private universities must be innocent of any attendant governmental controls is an unrealistic piece of wishful thinking. As has been said many times, there is no hope of duplicating in the United States either the procedures or the philosophy of the University Grants Committee. As you have often been told no doubt, it is not exportable to our shores; we will not let it in under our tariff. Those who in my country argue that an easy transfer of British practice is possible overlook the wide differences between our two nations in respect to popular views as to both the scope and function of the universities. They also overlook the radical differences between the Treasury and Exchequer systems of the two countries, and the legislative and administrative habits which the two systems reflect.

Furthermore, the time is not ripe in America for a national policy on higher education. Flexibility, experimentation and adaptation must still be our motto. The private university is still necessary to provide a healthy element of private enterprise in higher education. I know that private enterprise is a word which can cover a multitude of sins, but, like all words that cover a multitude of evils, it has some meaning. The private institution has an autonomy and a freedom to fix its own scholarly emphasis, to determine its own curricula, to set qualifications of admission and standards of scholarship, without danger of being questioned by Congress or by the educational bureaucracy which stands ready to take over in Washington when federal aid commences. Popular pressure to concentrate on the 'practical' subjects has been resisted more easily in the leading private institutions. It is no accident that historically these institutions have provided the most favourable atmosphere for the liberal arts, the 'useless' subjects.

As a class the private universities serve as an indispensable bulwark against attacks on academic freedom in a country which still has much to learn about it.

Finally, we oppose federal aid because of the educational philosophy which seems to motivate the most ardent proponents of comprehensive schemes of federal assistance to higher education. This philosophy is, I believe, uniquely American, but in my opinion dangerous nevertheless. It was expressed by the Commission on Higher Education appointed by President Truman in 1946, and composed of some prominent educators and some equally eminent laymen. This commission recommended that by 1960 means should be provided, at federal expense, which would enlarge our college and university facilities to accommodate 4,600,000 students annually beyond the secondary school level, on the theory that psychological tests demonstrated that 49 per cent of our population are capable of profiting from two years of general education at the college level and that 32 per cent have the mental capacity to entitle them to further liberal or professional education. The programme called for new federal appropriations of two billion dollars annually, a sum which has since become totally inadequate under our inflated price level. Whilst this proposal has not been implemented in any degree, and some may dismiss it as harmless, it received a great deal of favourable editorial comment in the Press and has the backing of many leaders in our public school system. To accomplish it would call for a general watering down of the content of our traditional college curriculum, which we can ill afford. Indeed our present college curriculum was criticized by the Commission as oriented too heavily to the intellectual. According to its school of thought, the first two years of college for

most of our young people should pay chief attention to skills other than intellectual.

This philosophy was endorsed and expanded in a report by a committee of the American Council on Education, our one national, comprehensive educational organization, which argued that our national goal should be that all normal youth should have an opportunity of education at public expense at least through the junior college level, or what our educators call the fourteenth year. Is it strange that some of us view such proposals with a fear approaching horror?

With almost two million students enrolled in our colleges and universities, it is obvious that America has embarked, for good or ill, on a great experiment, an experiment to supply higher education to the millions rather than to the thousands. Whether our national zeal for mass education will settle down permanently to a pattern which will embody the principle of recognized levels of excellence in the education of the millions, with their inescapably different levels of esteem, is a question which remains for the future to determine. At any rate our experiment is worth watching. I feel that we shall ultimately accommodate the many with full justice to the superior abilities of the few, but we shall have to work it out in our own way and, as I said earlier, that way must be seen to be understood.

In conclusion, I should like to express, on behalf of the American representatives who are here as your guests, our extreme appreciation of this generous opportunity which you are affording us to sit in at your conferences, even some of the most confidential. We shall all return home with new inspiration and broader horizons, and the kindly thought that motivated you in inviting us will always be gratefully remembered.

The CHAIRMAN: It gives us great pleasure to have the presence of our colleagues from the United States, and we are greatly helped by it. The variety of experience which we are to have this morning is not yet complete, and Dr E. G. Malherbe, Principal and Vice-Chancellor of the University of Natal, will now speak to us on Government and Universities in South Africa.

Dr E. G. MALHERBE (*Principal and Vice-Chancellor of the University of Natal*): To speak last in a group of four organized speakers such as you are having before you today has certain advantages and also certain disadvantages. One advantage is that I can scrap a good deal of the speech I have written, because I can take it as read. Moreover, it has been much better said than I could say it. The disadvantage is that I shall have to speak more or less impromptu (in a language

which, incidentally , is not my mother tongue) to supplement, rather than to repeat in my own words, what has been said by the three previous speakers.

In the first place, in this whole discussion of the relation of government to universities, one notices that the chief connexion is the *cash nexus*. On this point I wish to make two general remarks. Then I shall proceed to tell you something of the problem we are faced with in South Africa. As I listened to the discussion by my colleagues on this question at Durham, where the executive heads of the universities met, and to the papers this morning, I find that amongst all the diversities of ideas and practice one common characteristic stands out. It is that, just as in the Middle Ages there was evolved a group of mendicant scholars who obtained their scholarship by begging their way, we now seem to have evolved a new species in the educational world, namely, that of mendicant principals or vice-chancellors of universities. We beg our way along; we beg from governments, we beg from provinces, we beg from local authorities, we beg from foundations, we beg from private persons. In the process, we have to eat many dinners and lunches which we do not always relish! So large does this phase (not the eating) loom in practice, that, today when the heads of universities are appointed, they are very largely selected for their propensities as collectors of funds. It seems as though the art of wooing Mammon has become one of the chief accomplishments of university executives.

I notice also from what has been said that many of us have become worried about the consequences of indulging in this occupation. We are concerned about the strings which may be attached to the gifts which we receive, whether they are grants from governments or from private sources. These strings vary almost as much as the colours of the strings with which the badges are tied to our lapels; some very red, others merely pink and many just pure white. I do not know whether these colours have any significance! I do know, however, that the strings tied to money vary from country to country.

That brings me to my second point, namely, that in this whole question, the relationship of universities to governmental and other authorities that give money to universities is very largely determined by the type of society in which the university operates. A country's educational system is the reflexion of the political, social and cultural conditions of that country, and that applies especially to the universities. In fact, the discussions which we have heard on various forms of university finance and control, almost seem like dissertations on various national psychologies. On the one hand, we have universities which are 100 per cent supported by the state, and like it, and on the other hand we have others, as we have just heard from

the United States, which would under no circumstances like such a form of subvention. There can, however, be no doubt that in either case these universities do good work. Perhaps Tennyson's words are true also in this case: 'God fulfils Himself in many ways, Lest one good custom should corrupt the world.'

Whether we object or not to the strings which are attached to financial support depends very largely on the nature of the control. Is that control to be exercised in the judicious way which has been worked out so satisfactorily in the United Kingdom, through a University Grants Committee, where men experienced in university work sit in judgement on the claims of various universities for particular developments, or is it to be left to the whims and fancies of a little clerk in a government office, who often does the work by rule of thumb and then writes a letter telling the university that the minister has decided so-and-so? Having been a civil servant for over fifteen years myself, and having worked in a government department that deals with universities I know that too often that is what takes place. I can assure you that you are indeed fortunate in this country in having a Chancellor of the Exchequer who not only understands university affairs but actually reads the reports of your University Grants Committee! I think that all universities would object to control, particularly if it is uninformed and bureaucratic, whatever the size of the grant may be.

You will remember that in 1948, when we met at Oxford, we listened to a masterly address by Sir Walter Moberly, then Chairman of the University Grants Committee, who put the very question which we are discussing today. He asked: 'Is acceptance of substantial financial support incompatible with university autonomy? Is state subvention necessarily a Greek gift? Is any demand for a combination of autonomy and subvention really a demand to be able to eat one's cake and still to have it?' The answer he could give was in the negative, largely because of the wonderful system of control which has been evolved in this country. I refer to the University Grants Committee where expert knowledge is combined with good common sense. That particular item, though it may not be exportable to the United States, is actually finding favour in the eyes of Dominion governments, and recently in the eyes of South Africa. We are trying to work out something similar, thus far not very successfully, I am afraid. We have simply not been able to get together such an expert body, 'with teeth in it'.

In South Africa, we are faced with a rather different situation from that which obtains in the United Kingdom. It is one thing to operate a system of this kind in a stable society with a relatively homogeneous population as in the United Kingdom, but it is quite a different thing

to operate what is virtually a national system in a somewhat unstable and very heterogeneous society. We have in South Africa a multiracial society which consists of an established European society of 300 years standing and living interspersed with three other cultural groups: an emergent African population, an Indian population and a coloured population. Despite what the whites have done for them, these non-Europeans are backward when it comes to matters of education and government. As you probably know, there are various shades of opinion as to the policy to be followed in maintaining this European civilization and at the same time giving rights to the non-Europeans who outnumber us 5 to 1. To find, therefore, a body of men, a University Grants Committee, who could direct the policy for the support of universities with varying cultural and racial complexions uninfluenced by considerations of statecraft, or what we might call politics, is almost as difficult as 'belling the cat'. That has been one of the main reasons why, good as it is, the University Grants Committee system of state supervision and control has not yet been fully introduced in a country like South Africa. I can sympathize therefore with my American friends in this matter. They have a very large country, with varying conditions and traditions, and they cannot effectively apply a mechanism which works well in a relatively homogeneous society like the United Kingdom.

Let me now explain briefly what the South African situation is. We have eight universities. There is a ninth, which was the old University of South Africa, but has now virtually become a correspondence college. Four of the eight are dominantly Afrikaans-medium and four are dominantly English-medium universities. As you will see in the printed summary of my remarks there are in these universities some 18,000 students, of whom 1200 are non-European. By 'non-European' I mean Africans, Indians (i.e. Asiatics) and 'coloured' (that is, those of mixed blood). These are found in the English-medium universities. In the Afrikaans-speaking universities there are no non-European students. That is not because there is any legal bar to their entry; there is no law which debars a student from entering a university in South Africa on the ground of race. If a non-European student were to apply to enter one of these Afrikaans-medium universities, or any university for that matter, and were refused on the ground of colour or race, he could go to the courts and would surely win his case. This division is conditioned by *social* sanctions and not by legislation or legal barriers.

In each of the two large English-medium universities of Cape Town and Witwatersrand there are some two hundred non-European students who attend the same classes as the Europeans. They constitute, however, only about 5 per cent of the student body, and are

so thinly spread throughout the university in these classes that they are hardly in evidence. I do not think that any special consideration is given to them in the teaching. A class is taught as if it were a group of Europeans, and the non-Europeans keep up if they can. In the University of Natal, however, we have relatively and absolutely a very much larger non-European group. They are getting on to 400 out of about 1300 in the Durban section. In the Arts faculty they are actually in the majority. Consequently we find that in Natal they are taught more effectively in separate classes. But they are taught by the same staff, sit for the same examinations and get the same degrees, and are presented on the same platform at the graduation ceremony as the white students. Apart from the educational reason for teaching the non-Europeans in separate classes, we have to consider the strong social sanctions against mixing white and non-white which obtain in Natal. In no part of the country is the colour prejudice stronger than in Natal, which is the most English of the provinces of South Africa. So that, you see, the Afrikaans-speaking people of South Africa have by no means the monopoly of race prejudice.

Basically it is a question of numbers. In Natal we have separate classes because of the relatively large number of non-Europeans. In certain classes they are in the majority. When they come to the university, by having them separate we can give the non-Europeans special consideration and special coaching. They are culturally far behind the European students, and if we were to regulate the tempo of the teaching to the majority of the class it would inevitably bring down standards. That is true specially at the undergraduate level, but not always at the postgraduate level where we do in fact sometimes have the students together in the same classes. This is done only by common consent. What I have said is no reflexion on the native intelligence of the Africans and other non-Europeans, but is simply a recognition of their present cultural backwardness due to their home and other environmental conditions.

I mention this matter of mixed classes because recently members of the present South African Government have in public speeches criticized the policy of certain universities in a way which has caused a good deal of misgiving on the part of those of us who value the autonomy of universities. They accuse the universities which have non-Europeans students of working for a mixed race, and threaten that pressure of a direct or indirect nature would be applied to such universities. That, if carried out, would be completely intolerable for the universities which regard themselves as autonomous institutions. Fortunately, the universities are strongly entrenched in their charters, by which only they have the right to say what students they will

admit and what students they will not admit. No government can dictate that to them. As long as their charters remain, it will indeed be a bold minister who will interfere directly with that right.

We had a test case in that respect recently at the University of Natal, in connexion with our medical school, which is primarily, but not exclusively, for non-Europeans. There are already three medical schools which are primarily for Europeans. The government had agreed to establish such a medical school in Durban, where we have a superabundance of clinical material, and had therefore asked the University of Natal to make that its medical faculty. As you know, no vice-chancellor in his right senses will take on an expensive undertaking such as a medical school without certain financial guarantees, because a medical school could easily bleed the rest of the university to death if not carefully watched. The University of Natal, however, said that they would need a special subvention as they could not run it on the ordinary subsidy formula. The non-Europeans are too poor to pay the regular fees, so the government agreed to a special subvention. When, however, the statement came from the government indicating the actual amounts of the grants under various heads, they added the condition that no European would be allowed into that medical school. The University of Natal protested on principle. It replied: 'If you insist on that condition you can keep your money and we will have no medical school.' As I said before, the only body which can decide what students shall be admitted to any faculty is the university. That is our job. We accordingly went to see the minister personally and pointed out to him the dangers involved in violating this right of the universities. For example, we pointed out that, if a European came to us and said 'I want to be a missionary doctor and work among the Africans', it would be absurd to have to refuse him on account of his race, because this is by far the best place in Africa to provide such a training.

Moreover, we expect a number of Europeans to come to this medical school for postgraduate research work in diseases which are peculiar to Africa and particularly tropical medicine. We expect people from other countries which are interested in African health to come and work there, probably supported by foundations such as the Rockefeller Foundation. It would be stultifying for us to have to say 'You cannot come here, because your skin is white. This institution is for blacks only.' We also put it to the minister that acceptance of such governmental interferences could have far-reaching consequences in the reverse direction. Supposing another party which believed in mixed universities were to come into power, it could equally well impose those views on the universities which do not take non-Europeans in practice, and say to them: 'If you want state

money, you must also admit non-Europeans.' The minister realized that what was sauce for the goose could become also sauce for the gander, and he waived his condition about limiting our medical school to non-Europeans only. The University of Natal can therefore still admit students of any race it chooses to its faculties.

This point has a bearing on a distinction which is useful to keep in mind, namely, that there are two forms of governmental control. One is the purely financial, budgetary control, which would decide in terms of the country's available resources and its needs, for instance, whether a university should have a cyclotron or not.

This is fair and legitimate, if the state is to pay for it. The other form of control is the one that is tinged with party politics. This we consider very dangerous. In South Africa we have thus far managed to stave off this form of control. We are doing that in two ways. In the first place, we have been and are receiving our grants *according to a fairly fixed formula* which cannot be tampered with by any political party in power so as to penalize or favour any particular university.

Recently a report* has been issued by the University Finances Commission appointed by the government to inquire into the universities and to devise 'a basis on which the state should subsidise the universities, having regard to the freedom and autonomy of universities as statutory bodies and at the same time to the necessity of safeguarding the State against unrestricted financial obligations'. Through the courtesy of the minister I have been allowed to put before you some of the recommendations of this report, although it is still a confidential document. The details of the formula are given in the printed summary of my paper, and may be of interest to some of you as it is quite an ingenious formula within limits. The report is about to be laid on the table of the Houses of Parliament, and it is not for me at this stage to say whether the government will implement these recommendations or not.

There is one feature about it which gives us ground for hoping that the report will be implemented, at least so far as the financial side of it is concerned, and that is that the former Secretary of the Treasury was the Chairman of the Commission, and, according to an old saying in Afrikaans, it is sometimes a good thing to make the wolf the shepherd. If he recommends these grants he who has always been the wolf to keep us from the door when we applied for funds, there is a reasonable chance that the Treasury will find the money necessary to implement the report.

The universities in South Africa are therefore safeguarded by an objective formula based on factors which cannot be manipulated by

* Now published as *University Finances and Salaries, 1951: Report of Commission of Enquiry.* Chairman: J. E. Holloway (Govt. of Union of South Africa, 1953).

politicians or by officials, and a university can be sure that it will get the money by virtue of that formula, which is based on objective facts such as student numbers, the nature of the work it does, and so on, as set out in the printed summary of my paper.

In conclusion, let me say this: in the end it does not matter very much how the money comes to a university if only the main function of the university, namely, to carry on that Promethean spark of curiosity, to seek for truths, can be safeguarded. What matters is not the machinery so much as what happens between mind and mind in the class-room, in the tutor's study and in the laboratory. That is the end; the other things are merely the means.

DISCUSSION

The CHAIRMAN: The subject which has been introduced by the four speakers is now for general discussion.

Professor A. C. BANERJI (*Allahabad*): We are all anxious that the autonomy of the universities should be preserved and ensured. At the meeting in Durham, we were very happy to hear from Dr Mudaliar that our Central Government, the Government of India, has agreed to form a University Grants Committee on similar lines to the University Grants Committee in the United Kingdom, consisting of nine members, of whom three shall be vice-chancellors and the other six educationists who have had administrative experience. It has been suggested in responsible quarters that the three vice-chancellors should be selected by the Inter-University Board, and the six educationists by such academic bodies as the Indian Academy of Arts and the Indian Institute of Science. We have yet to see how it will work; we can only judge of its worth when it has been formed.

I should like to say something about the difficulties of the teaching universities in Northern India, and to refer to my own University, the University of Allahabad. This University was formed in 1887 as an affiliating university. In 1922 changes were made and the university was divided into two parts. One, the internal side, became a unitary and residential university, while the other, the external side, consisted of affiliated colleges. The external side separated from the internal side and formed the University of Agra in 1927. When it was formed as a unitary body in 1922 our chancellor, if I remember correctly, was Sir Harcourt Butler, who was perhaps a relation of our distinguished guest, the Chancellor of the Exchequer.

In 1922 the internal side of the university had about ninety teachers and some 800 students, the ratio of staff to students being 1 to 9. In 1952 the number of students had risen to 6000, whereas the staff numbered about 220, a ratio of 1 to 27. We carried on our work from 1922 to 1942 without a deficit. In 1942 the students numbered 2800, whereas in 1952, as I have said, there were 6000. The government gave us in 1942 about seven lakhs of rupees (about £50,000) and the grant has now been increased to thirteen and a half lakhs (about £98,000).

What is the situation? We want more teachers, but there is no government aid to cover the additional cost. The deficit has increased tremendously, and we are told 'You incurred additional expenditure without sanction, and created a number of posts, and now you have this deficit'. But what could we do? After we obtained our independence, the number of students passing through our secondary stage of education—which we call intermediate education—increased tremendously, and there was popular pressure on our universities to admit more and more students. How could we resist that? It was impossible for us to do so. How could we refuse admission to these students in the face of such tremendous pressure from the public and from the student community? We had to admit more students, and yet we are not getting the financial aid we require, although most of these posts have been covered and we have requested that accumulated deficits should be wiped out.

You know that economic conditions have deteriorated and prices have risen by about 300 per cent. Our clerical and subordinate staff make constant demands for increments in salaries. The basic pay of the lowest-paid wage-earners is about £2 per month in English money with an additional dearness allowance of £2 per month. They want higher wages. That is the situation with which we are faced. We are now told that it may be possible for our deficit to be met, but that non-academic authorities must have greater control in all aspects of university administration.

I am very happy to hear of the £27 million grant given by the government of Great Britain, without parliamentary control over the details of university expenditure. We wish we could have the same thing. It is true that the provision of higher education is an obligation of the state, but it should be met by providing the universities with adequate funds for this higher education, and not by controlling their academic policy and practice. Probably everyone will agree with that. The government are entitled to demand that we should do nothing contrary to the true interests of the country. In India we are faced with these difficulties, and I hope that we shall find some sort of satisfactory solution.

The CHAIRMAN: Mr Butler's heavy responsibilities require that he should leave us, but before he goes I should like to say how greatly we appreciate his being here, how pleased we are to have heard what he had to say, and how much he has helped our deliberations by his presence. (*Applause*)

Mr Butler then left the meeting.

Professor W. H. HUTT (*Cape Town*): This subject is such an important one that we should not be shy about it. I am speaking because of the lull in the discussion, not having originally intended to say anything. I felt that others would say what I am now going to say myself.

We are discussing what I regard as *the* most important problem which confronts the universities today. I feel that the United States has the ideal solution, and I agree with what Dr Dodds has said: if you have a large number of your universities sufficiently well endowed and sufficiently in contact with sources of income to be completely independent of the state, that is perhaps the greatest possible safeguard of academic freedom in all its forms.

The problem, however, which confronts us in many countries—and we feel this very strongly in South Africa today—is that we *are* inevitably dependent upon state finance, and we are worried about how our traditional freedoms can be preserved in the future. At the moment, academic freedom depends almost entirely upon tradition, upon a magnificent tradition which has somehow evolved in the past. What we are not certain about—and this must be true of many parts of the world—is whether the great tradition is necessarily going to persist. Mr Butler said that, when difficulties arise between the state and the universities, common sense and adjustment can usually overcome them. In the past that may have been so. So far it has been so in my country. At Cape Town I have been able to say anything I have liked, and I have sometimes said things that governments have not liked, and other members of our staff at the university have from time to time made contributions which have very much worried the governments of the day. For instance, Professor Cowen recently published a book which, I think, was mainly responsible for the upsetting of the Union Government on a great constitutional issue. There has been no interference whatever with his rights.

The difficulty is going to be in the future. Is this tradition going to persist? How can we make certain that it will persist? I feel, first, that it is most important that members of the universities should themselves exercise the greatest possible measure of responsibility in whatever steps they take and in whatever public pronouncements

they make. I do not suggest that there should be any internal censorship, but the general spirit of the university should make all members of its staff act and speak with the greatest possible care and responsibility, so as to make their moral position very strong.

Secondly, the universities ought to stand together in each country on this matter. It is a question of attaining unity. In South Africa it will be very difficult to get unity on this issue as between the Afrikaans-medium universities and the English-medium universities. I do not say that it is impossible, but for various reasons it would be very difficult to get unity at the moment. Already politics has had too serious an effect on our universities to make unanimity on the matter of academic freedom an easy objective. But it is one towards which we should work.

I believe, in conclusion, that, in spite of government financing of university activities, it is possible to maintain independence. It is just as possible to preserve university independence under these conditions as it is to have an independent judiciary, even though the administration of justice is inevitably financed by the state. It is, therefore, for the continuance of an independence which has so far been just as unquestioned as that of the judiciary that the universities should work. And what is ultimately more important than anything else in guaranteeing the continuance of this freedom is that the universities should stand together. Unity, I believe, is the answer.

Professor P. T. RAJU (*Rajputana*): I wish to speak in order to raise one question, which is also a form of comment. So far, the disadvantages of governmental interference have been pointed out, but there is another side to this question. Having been associated with two of the great state universities of the United States of America, the University of California and the University of Illinois, I know what governmental interference means, but in India we have the other side of the picture. Some of our universities are young. I appreciate the importance of the autonomy which a university should have, and the freedom which the professors in the university should have to pursue their researches, but is there any method of knowing whether this autonomy is being used in the proper way? We may ask ourselves this question: is there anybody in a university, any university professor or administrator, who is so dishonourable that he would use this autonomy in the wrong way? Certainly we do not expect it, but how many times, not necessarily in the universities but in other self-governing bodies, do we find people abusing the rights which they enjoy? Should we allow the same sort of thing to happen in some of the young universities, which have not sufficiently long traditions to enable them to carry on in spite of a small mistake now

and then by an individual? I am not sure about this, and I raise the question and leave it to be answered by this Congress.

Mr P. D. GUPTA (*Agra*): I am principal of one of the constituent colleges of the University of Agra, which I have the honour to represent at this Congress. The University of Agra is not a teaching university, although we are trying to build up some teaching departments; it is a university of the affiliating type and works through its constituent colleges, which are spread over a fairly wide area. There are now about fifty such colleges, including an engineering college, three medical colleges, and colleges for instruction in arts, science, commerce and law. Most of these colleges are under private management, controlled by what may be called non-government managing bodies. Some have endowments yielding a certain amount of annual income, but most of them are supported mainly by the income from fees and by government grants. Some of these colleges are very large; for instance, there is a college at Kanpur which has about 5000 students on its rolls, and another college has about 3000 students. My own college is situated in a small place, Khurja, but we have there in the various faculties about 1000 boys.

I must say that, in spite of its limitations, the government has been quite liberal in the matter of grants. We must realize that conditions in India are rather different from those in the countries of the West. We have an appalling amount of illiteracy in our country, and the government has to husband its resources and distribute them according to the requirements in the various fields in the order of their urgency and importance. I am not conscious of much interference with academic freedom, or even with the appointment of members of the staff. The University of Agra, for instance, is quite free to frame its own courses of studies and to fix its own syllabuses, and in my own college, of which I have been in charge for the last twenty years, I do not remember a single instance in which the government questioned any appointment made in the college. I am not going to suggest that all appointments are made strictly on merit, because they are made by managing bodies, and sometimes considerations other than those of merit alone may prevail; but I am talking at the moment of government interference. The university, of course, prescribes certain minimum qualifications which must be satisfied before a person is eligible for appointment in any of the constituent colleges of the University of Agra, and the university itself scrutinizes the returns made by these colleges. If an appointee falls short of the qualifications laid down by the statutes and regulations of the university, the university will have something to say about the matter.

There is a great deal of academic freedom in our universities. By 'academic freedom' I understand freedom to follow academic pursuits, freedom to express one's views and to allow one's mind free scope in the pursuit of knowledge. There is bound to be a certain measure of administrative control, particularly when finance is provided by the government. We have a University Grants Committee but I am afraid that its functions are not very wide; it is a sort of intermediary, transferring, after scrutiny and with its own recommendations, the demands made by the various colleges to government. I wish that something like the system which obtains in this country could be followed, so that the University Grants Committee may have definite funds at its disposal which it can divide between the various colleges according to their requirements; but I believe that we are in the process of evolving a system and that, in course of time, we shall have one which will be fairly satisfactory.

Lt.-Col. A. B. A. HALEEM (*Karachi*): After listening to the discussion, I feel that some of you may be interested to know how the relations between the governments and the universities of Pakistan, which is an entirely new country, are regulated. We have now six universities in Pakistan, two in the eastern wing and four in the western wing. Five of these universities have been created by Acts of the provincial legislatures. They are provincial universities in the sense that they have been brought into being by the provincial legislatures; they are also provincial in the sense that they are financed mainly by the provincial governments, but they also receive from time to time grants from the central government for the initiation and development of special schemes. The central government steps in to supplement the grants made by the provincial governments.

The university which I represent is known as the Federal University, because it has been brought into being by an Act of the Federal Legislature. It is also federal in the sense that is financed mainly by the federal government—the central government of Pakistan.

Our universities are supposed to have three main sources of income: (i) government grants, (ii) endowments and donations by benefactors, and (iii) fees derived from the students. In effect, however, we all depend very largely on government grants. The income from fees is not very large, except in the case of the Panjab University, which derives a very large income from examination fees. It has still the right to conduct the matriculation examination, but it is going to lose that right very soon.

We are a new country, and therefore our public—I refer here, of course, to the richer section of the public—is not yet in the mood to come forward with large donations. We have been in existence only

for six years. There has been a great deal of dislocation in the Indo-Pakistan subcontinent. About eight million people migrated from India to Pakistan, and a very large number from Pakistan to India. India is a very large country and, I understand, has been able to a large extent to settle the migrants that she received, but in our case the dislocation was most serious. We have been able to rehabilitate the agriculturists who came across the border, but we have still to deal with the large urban population, which it has not yet been possible for us to rehabilitate entirely. Having other problems of a serious nature to face, we have not been able to raise benefactions and endowments to any considerable extent.

We all depend, therefore, very largely on government grants, and in view of this fact I think that our governments, the federal government and the provincial governments, have behaved quite well. There has been no attempt to interfere directly in the affairs of the universities, and there has really been no infringement of our freedom. We have, of course, to submit our budget to the government at the beginning of the year, and the grant is largely a matter of negotiation. We have to convince the government of the need for a grant under different items, but once we have got over this hurdle and convinced them of the need for expansion there is no further difficulty. Every university has a recurring grant, and that is not liable to question by anybody but comes as a matter of course. It is only when we ask for extra funds and put up new schemes that we have to convince the government of the need for those schemes, and there is a certain amount of negotiation; if we ask for five lakhs we may get three or four, and so on. Once the money has been sanctioned, however, it comes in the form of a block grant with certain main heads, and the government's job is done. We have our Senate and our Syndicate and our Academic Council, and we are free to spend the money. At the end of the year government auditors come to audit the accounts, but their business is merely to see that the money has been properly spent and that there are proper receipts and vouchers. It is a purely technical business and does not interfere with our work.

Let me give you one example of how things are done. Mine is a new university. We are gradually centralizing all the advanced work under the university. The territorial limits of my university are confined to the federal area, which is a very small area, just the federal capital and a small area surrounding it. I have inherited a number of colleges, some of them quite old; the university is new, but some of the colleges are old. I am trying, with the concurrence of my Syndicate and my Senate and my Academic Council, to centralize all the advanced work directly under the university, all the postgraduate teaching and research, leaving the colleges to carry on

ordinary B.A. work. We have certain colleges such as the Medical College and the College of Engineering, and they will of course continue as before. We had a certain difference of views about this scheme with the government. They were prepared to sanction an adequate amount for the centralization of all the science teaching, because they realized its importance, but so far as the arts side was concerned they said 'We will sanction certain chairs, and then you can carry on the work on a co-operative basis. The professor will be appointed by the university. He will be the head of the department and will organize the teaching of the department on a co-operative basis, with the help of the staff of the colleges.' It took me some time to convince them that this scheme would not work. After some letters had been exchanged we met round a table, and the government gave in; I convinced them that this scheme would not work and that I needed in the university a central corps of teachers for each department, such as history, international relations, political science, economics and so on. The government gave in, and I now have a grant for the arts departments. That is how we carry on.

I am surprised that Professor Raju posed the question whether we are competent to determine what should be taught and what should not be taught in the larger interests of the country, and seemed to suggest—I do not know whether he meant to do so—that the government should interfere in these matters. Having spent thirty years of my life in education, I am surprised that any educationist should pose a question of that kind. We are in a better position than the government of the day to decide what is in the larger interest of the country. We who have worked on senates and syndicates and academic councils all our life do not need to be told by any politician what is in the larger interests of the country. We are in a position to tell them what is in the larger interests of the country, and what should be and what should not be taught.

There is one minor point which I should like to mention. I was surprised to learn from the remarks of Professor Banerji that in the University of Allahabad the peons and lowest paid workers get only £2 a month. In Karachi we pay them £8 a month. We have also tried in our new university to lay down very generous scales of pay for our teaching staff.

Professor H. R. BURROWS (*Natal*): It may not be inappropriate to return to the United Kingdom for a moment. My contribution is merely a question. I understand that the Select Committee on Estimates in the United Kingdom recommended early in 1952 that university expenditure should be subject to parliamentary scrutiny and inspection by the Comptroller and Auditor General. I also under-

stand that this was rejected by the Treasury, but I should like to ask on what grounds the recommendation of the Select Committee was based and whether there is any danger of the issue being again raised and taken seriously.

Mr A. KAZMI (*Jammu and Kashmir*): I represent what is perhaps one of the youngest universities in the Commonwealth, and have listened with great interest to the discussion of this important problem. Dr Dodds has made what appears to be a good case, but his case is based on fear of government. Whether one should fear government in a democracy I do not know. The British case is built, perhaps, not so much on fear of government as on hope in government. I am not certain yet whether we, who come from countries which have still to develop their educational systems and strengthen their universities, should follow the American pattern or the British one. It seems to me to be evident that universities have to go about with a begging bowl; it may be to the government, it may be to their alumni, or it may be to business concerns or wealthy people. The fear is that whoever gives the money may attach strings to it.

In a democracy, I do not know whether our fear of government is justified. I feel that if we have to go a-begging it will be better to go to the government and beg from them instead of going to private people or organizations. If we are the custodians of higher learning we must also be the places where leaders of political thought are made. If we are then afraid of governments, it seems evident that we have not been able to make a very good job of our own work.

As a representative of a very small and very young university, I still feel that our problem has not been solved, and I look to this Congress to give a lead in this matter to universities such as ours. What are we to do? In Kashmir there is no big money, and even if there were I should not go to it. The government are struggling hard and supporting the university without any attached strings, and thus the future of our university is assured. But there are others which are perhaps not so fortunate. I hope that those who speak after me will tackle this problem in a more realistic manner. We are of course interested in what happens in Canada, in Allahabad, or in Karachi; but we are, or we should be, more interested here in evolving some kind of working solution of this basic problem which confronts almost all the universities in the Commonwealth.

Mr D. W. SENATOR (*Jerusalem*): I come from a university which was established as a private university, the Hebrew University of Jerusalem. We lived under a mandatory régime, and we now have a considerable subvention from the Government of Israel. I take the

liberty of addressing you because I believe that I can make a small contribution to the understanding of this problem, which all universities face at the present time. All universities, even those in America, are facing problems and taking on tasks which, by and large, are beyond their means. In the United States there may still be certain private universities which are able to carry on on the old lines, but in the newly established countries in particular the universities face problems of development, both with regard to the manpower of the state and with regard to the national resources, which are far beyond their means and which necessitate heavy subventions by the government for these purposes. That, of course, is also true in the state of Israel, which had to absorb an enormously large immigration after the establishment of the state.

The dangers of interference by the government which have been described here exist, of course, in all countries, but in a democratic society, as distinct from a totalitarian society, there is one effective means of counteracting such interference if it occurs, and that is public opinion. It seems to me that the real solution of the problem which we face today, and which all universities are facing, is a true partnership of the university, the government and the community. So long as this true partnership exists in a real sense, governments will not dare to interfere with the internal affairs of the university, because the community will not allow it.

I am happy to say that in our country, a young country, there exists this true partnership between the university—which was established as a free, private university largely by the efforts of American Jews, and which still continues to receive large sums from Jews all over the world—and the government, which recognizes absolutely academic freedom and at the same time looks to the university for advice and help in its own tasks. Many of our professors head government departments and advise the government in the development of the country. There is also a partnership with the community. Public opinion insists that the academic freedom of the university shall be maintained. It seems to me, therefore, that our own little experience may show the way and indicate how, by the co-operation of these three elements, our goal, to develop universities freely and maintain their academic rights, can be attained.

Sir EDWARD HALE (*Secretary, University Grants Committee*): I wish to answer the question raised by Professor Burrows about the auditing of the accounts of universities in this country. The proposal made by the Select Committee on Estimates was that the Comptroller and Auditor General should audit non-recurrent grants made for specific capital expenditure. The proposal did not relate to the

general income and expenditure accounts. Nevertheless, it was felt by the Treasury that it would be difficult to keep the two things separate ultimately, and that was one of the reasons why they did not accept the proposal. It may be that the Public Accounts Committee will return to the matter again in their next report. We cannot tell what will happen then, and it is anybody's speculation how the issue will be settled in the end.

The CHAIRMAN: Unless any of the opening speakers wish to add to what they have said—and I do not think that they do; they have emerged unscathed from the discussion—we must now close this meeting. I am left with the impression that, representing very different groups of people, we all feel that we have a system, or hope to have a system, exactly suited to our own peculiarities if only we could have more of it.

SESSION ON ADMINISTRATION AND ACADEMIC DUTIES

Chairman: COLONEL LINDSAY RIDE
Vice-Chancellor of the University of Hong Kong

Opening Speakers:

DR D. VEALE (*Registrar of the University of Oxford*)

DR J. L. MORRILL (*President of the University of Minnesota*)

SIR LAWRENCE BRAGG (*Cavendish Professor of Experimental Physics, University of Cambridge*)

SIR REGINALD VERDON SMITH (*Chairman of Council, University of Bristol*)

SUMMARIES OF ADDRESSES

The following summaries provided by the opening speakers were printed in the Congress programme:

(*a*) DR D. VEALE

In spite of differing origins and development, all universities have certain basic similarities: routine work—keeping accounts and records—must be carried out, and these duties are performed by servants having no independent authority and no voice in the management of the university they serve. Whether this type of servant should persist right up to the top rank of university administrator is the question at issue. Top-rank administrators must be of first-class quality if cases for decision are to be presented impartially, completely and correctly, and without a heavy burden of irrelevant detail. Apart from this ability, in the administrator must also rest the trust both of those from whom information has to be sought and of those who have problems to solve. The case adequately presented, the decision generally is easy, but the reason against the administrator carrying out the easy as well as the difficult part and taking the decision himself is found deep in the basis of academic life. The *raison d'être* of a university rests on its ability to produce conditions

in which scholars' individual talents and natural bent may be developed and pursued freely, and in which accumulated knowledge may be handed on to others. Of the other functions of a university, what may be called the social function—the training of young people and research in problems of social importance—is the one in which the public is most interested. It is also the function for which it is easiest to enlist public support. It is at this point that encroachment of the social function on the life of the university as a result of public demand can begin, and herein lies the reason for the decisions of policy being taken by the academic staff. It means that academic staff must undertake administrative duties so that responsibility is adequately shared, even though such duties may be unwelcome. It then falls to the administrator to lighten the burden so as to release the scholar so far as possible to his own studies.

(*b*) PRESIDENT J. L. MORRILL

'Its institutions of education characterize a people as well or better than any other group of its institutions', Charles W. Eliot of Harvard, renowned among American university presidents, wrote to his mother on a visit to France in 1864. The organization and development of universities and colleges in the United States illuminate this observation.

'Administration', in these institutions, has evolved historically and indigenously as the instrumental co-ordinate of 'academic duties' in the educative process. This duality (which is not a dualism) differs from the British and European tradition. Sometimes sharply criticized by the professoriate both at home and abroad, it still seems to serve successfully the American purpose, the advancement of learning, the search for truth, the instruction of youth, and the welfare of the nation.

The American tradition of higher education—transplanted in origin from Cambridge and Oxford, influenced by Scottish (and to a lesser extent) the French examples, at one stage strongly modified by the German universities of the early nineteenth century—was most steadily shaped by the social and political needs and forces of its own milieu. This was the milieu of the expanding frontier, of productive agricultural pioneering, of the discovery and exploitation of rich natural resources, of resourceful business and inventive industry, of a buoyant sense of individual and 'classless' opportunity.

Paralleling these phenomena were the rise and spread of schools, colleges and universities, with sometimes debated but understandable emphasis upon the 'usefulness' of knowledge, with needful demand for developmental leadership, and with reliance upon widely responsive private and public interest and support.

Thus lay-control and its implementation, through administrative initiative, became the characteristics of university government. So it is, more explicitly, that:

(1) Full legal authority is vested in lay (not academic) boards of trustees (regents, overseers, curators and the like) for the government and ongoing of the typical American university.

(2) It is to and through principally the president—aided by deans and other fellow-administrators, advised and admonished by component college faculties and all-university senates and faculty committees—that the lay trustees delegate and exercise their powers.

(3) 'Administration' is a clearly recognized, although sometimes uneasily accepted, function of university operation, co-ordinate with 'academic duties'. To the faculties, however, is definitely delegated in the typical American university constitution (approved by the lay trustees) the management of academic affairs.

(4) Administration, therefore, is held responsible in two directions. The president is the executive officer of the lay trustees, and likewise the head of his faculty. He is the spokesman and interpreter of each to the other. It is the expectation that he will meet the requirements of institutional leadership and 'educational statesmanship'. To these ends he must mobilize, co-ordinate, and integrate faculty participation, trustee influence and support, public and private response to the purposes and the needs of the university.

In the context of this catalogue, the American university administrator, while deriving his duties from lay authority, recognizes his deeply responsible relation to academic duties as one not of *primus inter pares* but of *servus servorum*. He discerns the duty of indispensable and authoritative assistance, protection and productive partnership—realizing, as President Eliot also wrote, that 'learning is always republican...it has idols, but not masters'.

(*c*) PROFESSOR SIR LAWRENCE BRAGG

The functions of a university are teaching and research, and the criterion which we must apply in assessing the efficiency of university administration is the effectiveness with which it helps towards creating the best conditions for teaching and research within the limits imposed by staff and budget. Though this definition may seem rather obvious, yet I think it is worth while reviewing the university structure in the light of it from time to time. The conditions in a university are unusual. The efficiency of teaching and research depends on intangible and psychological factors which are hard to define and defend when their requirements appear to come in conflict with the demands of tidy efficiency. This is particularly the case as regards research, but it applies to teaching as well.

In teaching, our function is to train our young people in good 'style' of thinking, just as a games expert teaches a young player how to make strokes in the right way. In addition, we have to assess the students' 'points' just as a trainer assesses those of a racehorse. This judgement of their quality is necessary so that we may help them to find the right posts when they leave us for a career.

In research, our main preoccupation is to place the young research student in the right environment and to make him feel how tremendously interesting his research is. At the same time we must have time to think about his work and plan its strategy. The most important thing in research is the flash of imagination which initiates a new line of investigation. It is impossible to be sure the inspiration will come, but one can define precisely the conditions under which it is certain not to come. These are preoccupation with agenda and a full engagement book.

It is only too easy to allow the pressing claims of administrative details and correspondence to take more and more time until they postpone almost indefinitely the occasions for quiet and undisturbed review of the teaching, planning of the research and reading. If yielding to this insidious temptation becomes a habit, the fire and enthusiasm are lost and the university teacher ceases to perform his real function.

This peculiar nature of university work justifies a far looser structure of administration than would be correct for a business or government office. It justifies devolving responsibility to the maximum extent. It is economic to supply large departments with administrative and accounting help which relieves the teaching and research staff of preoccupation with matters other than teaching and research, and to give secretarial assistance on a generous scale to the heads of smaller sections.

(*d*) SIR REGINALD VERDON SMITH

1. To possess successful administrative machinery is increasingly important to a university. Many reasons for this include not merely increasing student numbers and the wider range of subjects for teaching and research but also the need for, e.g.:

(i) authoritative discrimination among competing claims upon resources;

(ii) first-class staff management of technical and other non-academic staffs;

(iii) attention to the growth of special studies not necessarily falling within the province of existing faculties;

(iv) development of relationships with outside bodies—governmental, industrial, educational, etc.;

(v) meeting increasing responsibilities for public funds;

(vi) matching increasing work in connexion with buildings and services, libraries, laboratories, etc.

2. It is of the essence of good university administration that it is not a mysterious process extraneous to everyday academic life but is a homogeneous part of the university. The administrative process necessarily makes demands upon the academics: these demands can be irksome and will be justly criticized if the logistics of administration are inefficient. But as with any large and complex organization sound principles for the conduct of business and good methods can facilitate decision, secure effective financial control, and greatly assist departments to achieve their objectives. Organization and method in the university thus merit increasing attention.

3. Post-war growth of universities has evidently introduced a variety of problems familiar to administrators in other fields. Examples include:

(i) *Procedure*. Quality of decision is rightly preferred to speed but modern conditions often demand procedures which, whilst no less thorough than before, can operate more rapidly.

(ii) *Staff*. Specialization, especially in scientific and technological subjects, demands rising standards of knowledge and experience among the administrative staff if proper advice is to be given and proper decisions secured. Staff selection and training are thus of growing importance.

(iii) *Financial control*. The increasing complexity of university activities requires developments in the methods of financial control—as in industry, traditional financial accounting has to give way to modern cost accounting techniques, the proper use of which greatly assists administration.

4. But the introduction of changing techniques must not disregard the principles peculiar to the character and purpose of university administration, notably:

(i) Financial sanctions applying in the university differ from those familiar elsewhere: though by no means unimportant they should have different interpretation and emphasis.

(ii) Initiative in a university springs not from a governing body with autocratic powers but from the faculties and departments: the administrative process is therefore interpretative and selective rather than creative or mandatory.

(iii) There are no easily defined boundaries to a university's activities: even so, the development of criteria for the marking out of boundaries will become a growing responsibility of university administration.

5. Finally, in any study of university administration, it is worth re-examining the case for the layman co-opted to participation in university affairs. If laymen are to retain their present flattering association with universities, all concerned must feel satisfied that it is as a living and creative influence and not as an anachronism. For several reasons it is to be hoped that the former will continue to be true.

OPENING ADDRESSES

The CHAIRMAN (COLONEL LINDSAY RIDE): Those of us who attended the functions at Southampton a week or two ago will remember that one of the speakers there mentioned the triple basis of university organization: students, staff and administration. On the way from Southampton to Cambridge something has happened to this trinitarian conception; it has undergone a reducing change, and we are now confronted with the dual conception of administration and academic duties. I do not suggest that either the staff or the students have disappeared altogether or even that they have developed into freemartins, but I suspect that this Congress will look on them as conjoined twins. Perhaps before the discussion is over we shall find whether those conjoined twins are joined through the head, the heart or some other part of the body. I apologize for this embryological approach, and shall make immediate amends by calling on Dr Veale to give us the benefit of his long experience of administration.

Dr D. VEALE (*Registrar of the University of Oxford*): One of the first full-time professional administrators that there ever was in this country—I mean in the sense of a man trained to earn his living by administration as a lawyer does by the law—was described by Disraeli as 'a fiend in human shape'. As Disraeli described himself, in another connexion, as being 'on the side of the angels', it may be presumed that he knew the difference between an angel and a fiend. It is a little putting off to a timid man to be addressing an audience most of whom probably regard him as a fiend *jure dignitatis*. However, I shall do my best.

If universities were all of one type, there would be some hope that the role of the administrator might be described in a way to satisfy

everybody concerned; but happily those universities at any rate which follow the British tradition have not yet been congealed into uniform moulds. Their origins may be either in the rough and tumble of the medieval university, where scholars congregated with no other control than that which they imposed on themselves, or, at the other extreme, in the sectarian university, governed by an external board of trustees charged to secure strict conformity to doctrines imposed from outside. Though their modern shapes may bear but slight resemblance to their originals, both their forms of government and their ideas of what they exist for are likely to be affected by their historical development; and so how and by whom a university is governed at any time is not a matter of choice, but is largely predetermined.

Before the varieties of administration are examined, certain basic similarities can be dissected out. In any institution there are routine duties which are discharged by hired menials. Records and accounts must be kept, buildings must be maintained, and questions of fact must be answered. The harmless drudges, often called registrars, who do these things can be a threat to no man's independence or peace of mind—to no one, at any rate, who is prepared to accept so much conformity as is essential to membership of any community.

One question which is set for us to consider at this session is whether all university administrators, right up to the topmost, should be harmless drudges of this kind, having no opinions of their own and no voice in the management of the institutions which they serve, and if so, if they are to be of that kind, what quality of government their institutions would enjoy.

Even the 'harmless drudge' theory by no means implies that the full-time administrator need be of no more than third- or fourth-rate quality. The full-time administrators under any dispensation, however silent they may be in council, must at any rate produce correct, complete and impartial presentations of the facts about which decisions have to be made. To do that they must at least understand the meaning of relevance, a capacity to do which is a very large part of what makes up first-rate quality. In some institutions which I have seen, the experiment has been tried of not telling those who make decisions only what they need to know, only what is relevant, but of telling everybody everything. The result of that is, of course, that nobody knows anything. When you see that happening, you realize the value of some of the qualities which no university administrator can do without.

To be both relevant and impartial, a harmless drudge (let us call him) must not only be able to understand pretty complicated issues but must also be trusted. No one can be impartial who hears only

one side of a case. If he is going to hear both sides, that must necessarily happen in one of two ways: he must ask, or he must be told without asking. But his academic colleagues or masters will only tell him their troubles without being asked if they think that he can help them, and they will only tolerate being asked about them if they are sure that the object of asking is to help. In short, they must believe in both his desire and his capacity to help.

It already begins to look as though even the harmless drudge needs to be a man of some quality, and is likely to find his work both interesting and exacting. Indeed, to a man who has no desire for power such a life may be completely satisfying.

Is there, then, any reason why these qualities should not be more fully used than in the mere purveyance of information? Generally when the facts of a case are correctly and lucidly presented the decision is easy. Why not, then, let him who has done the difficult part do the easy part too? The reason, as I see it, goes deep into the basis of academic life. In that life, what matters more than anything else is what the individual wants. A university does not exist to produce and transmit a controlled volume of knowledge, like an industrial research establishment; it exists to give individual scholars the chance to follow their own bent, wherever it may lead them, and to hand on their accumulated knowledge to their pupils and to their successors.

Naturally in such institutions some sort of homogeneity of purpose develops: and like attracts like, since to very few men is it given to be able to work effectively in utter isolation. Moreover, most scholars are happily so constituted that they like teaching, if only in order that 'knowledge may grow from more to more'; and since teaching, to be fruitful, must be systematic the teaching syllabus acts as a sort of natural bond. The duty of the administrator, therefore, is to secure for his academic colleagues conditions in which their individual talents may expand freely, but not to force their activities into some artificial mould. In a good university, the moulding will take care of itself.

When I say that universities exist to give scholars the opportunity to follow their bent, I do not, of course, mean that that is their sole function. Society naturally looks to the universities also to train young men and women for active lives, and it calls on the universities to devote part of their powers to research in problems of social importance. Some people, indeed, regard these as the first duties of a university. I am not concerned here to classify our duties in order of urgency, but I am quite sure that no institution which does not give the individual scholar the chance to follow his bent is a university. It may be none the worse for that, but it will not fill that place in the pattern of society which a university fills.

For convenience, let me label one function the academic function and the other the social function. It is pretty obvious that what the general public is most interested in is the social function of the university. The public is glad when its children get good degrees or when some discovery of immediate practical importance is made. 'Now', it says, 'we are getting our money's worth out of these universities.' There is not the slightest risk, therefore, that this social function will languish for lack of support; the real risk is that, as a recent Oxford vice-chancellor said, the universities will be killed by this sort of kindness—meaning, of course, excessive support of the social aspects of their work.

How is that method of euthanasia to be prevented? The risk can perhaps be defined in this way. Money can be got fairly easily for services which many people desire, particularly nowadays, when most of the people who want the services merely have to vote that the money shall be found by someone else; but it is infinitely difficult to get money for obscure purposes, for a purpose which many of the public cannot even comprehend.

I remember that when my university was applying to the court for the variation of a trust concerned with astronomical studies, we put in the application that the change was desirable because as a result of it more knowledge would become available, for the public good, of certain obscure conditions in the upper atmosphere. The judge asked whether we meant that the public needed this knowledge. Counsel replied in the affirmative, and the judge remarked 'Well, I am not conscious of it.' The public can hardly be expected to provide money for needs of which it is not conscious.

This difficulty of getting money has not changed essentially since the days when universities depended on private sources for the benefactions and fees by which they were supported. The problem is still essentially the same when in this country the joint efforts of the University Grants Committee and the Treasury have to be used to extract money on behalf of the universities from the pockets of the taxpayer.

My answer, therefore, to the question how the academic functions of a university are to be shielded from the encroachments of social demands voiced through government agencies is that the final voice in determining academic policy must be that of the academic staff. Nobody need be afraid that social demands can be ignored nowadays as they were in Oxford and Cambridge a hundred and fifty years ago; our paymasters, who are the public, will take care of that.

But a form of government in which one set of persons deliberates and another decides is no government at all. It is not enough that the academic people should have the power to say Yes or No to

proposals framed by the administrators; they must themselves share the full responsibility for whatever is done or left undone. However unwelcome it may be to those who say that they only want to be left alone to get on with their work, they must accept the fact that a part of their time must be given to administrative duties; and the job of the permanent official must be to lighten those duties to the utmost extent that is possible without detriment to the freedom of the individual scholar to follow his own bent to the limit of his powers, wherever that may lead him. If the freedom of the individual scholar has to be curtailed in the interests of the body corporate, it must in my judgement be by the decision of his peers and not by the decision of his servants.

The CHAIRMAN: I now have much pleasure in calling upon Dr Morrill, President of the University of Minnesota.

Dr J. L. MORRILL (*President of the University of Minnesota*): As in any democratic enterprise, the problems of government, including university government, seem never quite resolved. In the United States, where there is full awareness of the British and continental university traditions, the topic of this discussion, 'Administration and Academic Duties', recurs from time to time as a somewhat sensitive issue, there having been, as you know, highly articulate critics of American university government and administration, such as Thorstein Veblen, James McKeen Cattell, Upton Sinclair and others; while in England the animadversions of the late Professor Laski on our system are well known.

The American Association of University Professors, which is influential and widely organized among our college and university faculties, gives continual and sometimes rather captious attention to this matter.

Let me say at once that I know of no authorized spokesman for American higher education. Its pattern being so diverse and its policies and processes usually in flux and always in question, no philosophical or even descriptive pronouncement by any American professor or educational administrator is likely to stand unchallenged. Indeed, I cannot even presume to speak for my colleagues of the Association of American Universities, except to say how deeply privileged we feel to participate in this impressive Congress by your gracious invitation.

The aims of science and scholarship, the advancement of learning and the search for truth, are universal and universally comprehended, but their relevance to the social realities of different times and places does require different forms of expression and organization.

'Its institutions of education characterize a people as well as or better than any other group of its institutions', Charles W. Eliot of Harvard, renowned among American university presidents, wrote to his mother on a visit to France in 1864; and the report on the recent study of higher education in the United States, sponsored by our Association of American Universities, observes also that 'there must be always a subtle relationship between an institution and its environment'. The organization and development of universities and colleges in our country illuminate those observations, and they do bear on the subject for our discussion to-day.

'Administration', in our institutions, has evolved historically and indigenously as what I may describe as the instrumental co-ordinate of academic duties in the educative process. This duality, which is not a dualism, undoubtedly differs from the organization which is familiar to most of you who are attending this Congress.

The American tradition of higher education, transplanted in origin from Cambridge and Oxford, and influenced by the Scottish and (to a lesser extent) the French examples, at one stage strongly modified by the impact of the German universities of the early nineteenth century, has been most steadily shaped by the social and political needs and forces of its own milieu. This was, generally speaking, the milieu of the expanding frontier, of productive agricultural pioneering, of the discovery and exploitation of rich natural resources, of inventive industry and resourceful business, of a buoyant sense of individual and 'classless' opportunity.

Paralleling these phenomena were the rise and spread in all parts of our country of schools, colleges and universities, with understandable emphasis upon the 'usefulness' of knowledge, with needful demand for developmental leadership, and with reliance upon widely responsive private and public interest and support.

But, to go back a step, lacking a true teaching class in the Massachusetts Bay Colony, the founders of Harvard, America's oldest institution of higher learning, constituted a board of governors, called the Board of Overseers, of six clergymen and six magistrates. The College of William and Mary, organized by Royal Charter in 1693, was launched likewise with a body of non-teachers as its governing board. Yale University began with ten clerical trustees, and Princeton with a mixed governing body of religious ministers and laymen.

Thus, lay and not academic control of American higher education and the exercise of lay authority through administrative delegation became characteristic, for good or ill, of university government; a characteristic which has endured in the United States to the present day.

'Viewed theoretically and historically', as Dr Samuel P. Capen,

respected former Chancellor of the University of Buffalo has written in a recently published book,* we see in our country, 'a simon-pure example of authoritarian government. . . a plan of university control which technically and legally does not show even a chemical trace of democracy'.

But actually, as he points out, the case is different. After describing the defeated struggles of the professors in the early days 'to capture the authority over their institutions which they believed that they were entitled to have, and which their English colleagues exercised', he observes:

'The American plan of institutional management is without doubt responsible for the prodigious and unparalleled spread of higher education in the United States, for the reason that it directs the attention of hundreds of individual citizens who serve as [governing] board members to the advantages of a wide diffusion of educational opportunities. These citizens in turn help to create the public sentiment which finds expression in gifts and appropriations wholly unmatched in almost any other country.'

'In particular', he says, 'the concentration of executive authority inherent in the American plan facilitates the expansion of individual institutions and their quick adaptation to the changing demands of the society they serve.'

'Educational administration', he continues, 'is a necessary institutional function. . . its sole purpose is to facilitate the processes of teaching and research, and to promote improvements in these processes.' Indeed, let me remark that one will seriously misinterpret the function of educational administration in the United States if one fails to note the evolution of the American university presidency into a developmental rather than an operational office.

Operationally, in fact, it is to and through the president, aided by deans and other fellow-administrators, continually advised and admonished by college faculties, senates and faculty groups, that the legally all-powerful boards of trustees (regents, overseers, curators and the like) exercise most of their managerial powers. To the faculties, however, is definitely delegated, in the typical American university constitution, the management of academic affairs. Here I refer to the requirements for admission, the formulation of curricula policies, recommendations for the employment, assignment and promotion of academic staff, and their compensation within budgetary limits determined by the trustees, and administration.

'Administration' is a clearly recognized function of university government, co-ordinate with but not subordinate to 'academic duties', but it is held responsible in two directions.

* *The Management of Universities* (Foster and Stewart, Buffalo, 1953).

The president is the executive officer of the lay trustees, and likewise the head of his faculty. He is the spokesman and interpreter of each to the other. It is the expectation that he will meet the requirements of both institutional leadership and educational statesmanship. His task is not a simple or an easy one, because he must mobilize, co-ordinate and integrate faculty participation, trustee influence and support, public and private response to the needs and purposes of the university.

So large an assignment and so great a responsibility may seem unrealistic to some of the vice-chancellors and principals and rectors and registrars and members of faculties here present. It may seem to present an astonishing contrast to the situation of the British universities reported by the author of *Redbrick University*, who wrote that in the university life of the United States, 'some, perhaps the majority [of the professors], show hardly the slightest interest in the general policy of their university'.

That contrast, however, is over-accentuated, I am sure. The American university administrator is constantly in the closest communication and consultation with his faculty, regularly through his deans and faculty committees and often individually. He is supported in his duties by a considerable corps of associate administrators, thus diffusing widely the exercise of authority. In most cases he and they have been faculty members themselves and remain very sensitive to professorial sentiment and morale.

Indeed, it is the American tradition for the president to become himself the initiator, the catalyser and the energizer of teaching duties. In this respect he may be compared, I suppose, with many of the eminent headmasters of the British secondary schools.

The history of higher education in the United States takes very large account of such presidential leaders as Francis Wayland of Brown, Charles W. Eliot of Harvard, William Rainey Harper and Robert M. Hutchins of Chicago, Nicholas Murray Butler of Columbia, Andrew D. White of Cornell, David Starr Jordan of Stanford and many others. It illuminates Mr Chester Barnard's remark that 'the most strategic factor in human co-operation is executive capacity'.

A guest of this Congress could not know what may have prompted the inclusion in this programme of the topic 'administration and academic duties'. In answer to my inquiry on this point, the distinguished Chairman of the Congress Organizing Committee, Sir Philip Morris, was so kind as to suggest that some description and interpretation of the American system might be useful, and this I have attempted. The primary significance and priority of teaching duties all of us fully appreciate. The growth and larger responsibilities

of administration are an inevitable concomitant of size and complexity in any enterprise, regardless of historical origin and tradition.

The thought has occurred to me that in the civic and provincial universities of this country the increased enrolments, the expansion of professional and curricular undertakings and the influence of lay representation on governing boards may have presented problems and may have given rise to apprehensions in regard to administration in relation to teaching duties. Perhaps, indeed, your American visitors have been marshalled as unhappy examples of the possible degradation of university integrity!

Mindful of this, I am aware that my description of the role of administration in the American university may have seemed to you somewhat defensive of a necessary evil, but I have not meant it to be so.

To your American guests the phrasing of this topic, 'Administration and Academic Duties', seems entirely appropriate—administration *and* academic duties, with emphasis on the connective. It would be equally appropriate to discuss administration and research, or administration and public service. Either would have illustrated a basic relationship which must underlie the voluntary nature of the university enterprise, in which any form of arbitrary administration is incompatible with success.

The presidency of the typical American university I have used simply as the symbol of the administrative function, historically established and indispensable. Its best incumbents, I beg you to believe, are not autocrats, unmindful of their overwhelming obligation to the academic function, despite the lay derivation of their considerable authority. Their relation to their academic colleagues is not that of *primus inter pares* but rather of *servus servorum*. They discern the duty of productive partnership; realizing, as President Eliot also wrote, that 'learning is always republican...it has idols, but not masters'.

The CHAIRMAN: We are now to hear this problem discussed from the point of view of the research worker, and no better choice could have been made than that of Sir Lawrence Bragg, Cavendish Professor of Experimental Physics in the University of Cambridge.

Sir LAWRENCE BRAGG (*Cavendish Professor of Experimental Physics, University of Cambridge*). I consulted Dr Foster about the scope of our discussion at this meeting, and he suggested that I might talk about 'The competing claims of departmental organization and university committees on the one hand, and personal research and teaching on the other'. I was very glad to adopt his interpretation of our subject.

Before I discuss these competing claims, I should like to make three points. In the first place, I think it is a most urgent and important question, because there can be no doubt that the administration which has to be dealt with by the head of a department has increased greatly in complexity in recent years. The devotion of some thought and analysis to this problem would give rich dividends. In the second place, I am confining myself to our internal problems, and not considering university and departmental relations with outside bodies, important as these are. In the third place, we must realize that the remedy is one which we must find and apply ourselves. We value our independence, which places the control of our university affairs in the hands of the academic staff, who have lay administrators to help them, and not under lay control which employs academic assistants. This places a corresponding responsibility upon us. There are certain administrative duties which we cannot escape, and members of the university staff must be prepared to spend time and thought on them, as the previous speaker, Dr Veale, has so rightly emphasized. We must seek the happy mean between a proper attention to really important matters, and a too great preoccupation with details which detracts from the efficiency of teaching and research.

My experience as head of a university department, which will end this year, has been at only two universities. I have had the last fifteen years at Cambridge and before that I had nineteen years at one of our great civic universities, Manchester. The problems are very different in these two places. In Manchester our main trouble, I think, was the large number of committees on which one was placed *ex officio* as the head of a department. It was rare for an afternoon to pass without at least one committee, and very often there were two or three. In Cambridge, on the other hand, the main claims on time are those of departmental administration, and more recently the increasing national claims due to the large number of government committees on which university professors are asked to serve. At Cambridge the number of committees on which one sits *ex officio* is small; the staff is so large that only a selected number serves on the important general committees.

The main functions of the university are teaching and research, and it seems to me that the criterion which we must apply in judging the efficiency of university administration is its effectiveness in helping to create the best conditions for teaching and research within the limits imposed by staff and budget. I fear this may seem a rather trite and obvious point to make, but I think it is one which it is well to keep in mind when thinking about university administration. Looking back on my own experience as a university professor I can remember long

periods when I think it is fair to say I hardly got 10 per cent of my time for teaching and research. I blame no one but myself for this, least of all the able members of the university administrative staff, who gave us so much help. Everyone wished us to have more time, but something about the university conditions led us to fall into some kind of insidious trap of not being able to devote a proper amount of time to the teaching and research which as experts we had been appointed to do. How did this come about?

The cost of administration can fall very heavily, to put it on its lowest basis. It is a very costly business to use the time of presumably highly intelligent and highly paid people like ourselves to sit on a large number of committees. Taking the average committee, if one counts the time spent by the secretary and chairman in preparing the agenda and the time which the staff put in in studying the agenda and attending the meetings, the cost must be something like £100. If further we reckon—and I think these figures are of the right order—that on 150 days in the year there are six committees of one kind or another in the average civic university, it must be realized that £90,000 a year is being spent on committees, apart from other costs of administration.

And this is perhaps the least important cost of these academic preoccupations. The real reason for our concern lies deeper, in the nature of teaching and research themselves. To take research; we must remind ourselves to what an extent it is the product of leisure. What counts in research is the flash of inspiration, the coming of some new idea which initiates a new line and which is the stimulus to do all the heavy work which is necessary in following it up. We cannot be sure when these happy visitations of the muse will come; we cannot command her. But under some conditions we can be absolutely sure that this happy event will never take place; they are preoccupation with agenda and a full engagement book. Thinking back, these splendid times when one has had a good new idea have all come when one has been able to say 'I have nothing to do this morning. What shall I do?' It is then that we pull out our old notes and follow up some exciting idea, or visit one of our research men and get to the bottom of what he is doing.

The danger, it seems to me, is that in seeking this leisure we are particularly at the mercies of our consciences. One cannot ever be sure that one will have a good idea. It always seems more immediately important to answer letters, draw up reports, or master the agenda of a committee which is shortly to meet. One is particularly defenceless, because it is always so much easier to be businesslike than to have a good idea. Both our consciences and our human frailty prepare this insidious trap for us.

It is the same with teaching. If lectures are not to be hack work, each must be a creative effort, carefully planned and composed and freshly prepared. Then there is the reading with which it is so hard to keep up, but which must be done if we are to familiarize ourselves with the work of others and be stimulated to new work. All these things need leisure. They all suffer if we must continually remember that there is something we must do by next Tuesday.

What are the remedies? In the first place, ought we not perhaps to think whether we can devolve more responsibility in university administration? We should be sure that administrative details are settled at the lowest possible level in our university work, and that committees are reserved for questions of strategy and policy. I often think that one could get a good measure of the efficiency with which the administration of a university is carried out by applying a micrometer gauge to the agenda of the committees. The best committee is one whose agenda is on half a sheet of notepaper, with perhaps half a dozen sheets of explanatory notes bringing out the main points which the committee has to consider. When we see agenda about an inch thick it is a sign of the breakdown of administration. Such proliferation is a sure symptom of that dread disease, administrative cancer. It means that many points of detail are coming up to a high level, which could perfectly well have been settled at a lower one.

Again, I often feel that in our university work there is a certain unreality about the presenting of cases by departments for consideration by university committees. We present cases for new posts, new buildings, new equipment and so on, and our colleagues at considerable expenditure of their time and energy are trying to go into these cases, balancing their claims against cases put up by other departments. Could not much of this be avoided by considering broader issues? The main point is—how much can the university afford to spend on this or that department within the limits of its total budget? Nobody can judge better than the head of a department how his particular allocation can be most effectively spent. One can always make out a case for any expansion; the sky is the limit to what we could do if we had the men, the money, the buildings and the materials with which to work. There must of course be a check on such expansion, but it should be an overall one, that of not exceeding a budget.

A very good case for centralizing control can always be made out. It can always be said with truth that many mistakes by departments would be avoided if such control is exercised. But could not an equally good case be made by an active Ministry of Education for a close control from London of the internal activities of all the universities in this country? We believe passionately that such a

control would be injurious to the best work in the universities; surely the same principle applies to the relations between the university and its departments. I would therefore say that in seeking a remedy for the increasing complexity of university administration we should continually ask ourselves whether we are not trying to exercise too much control over the running of each other's departments. The block grant to the universities and their freedom to plan their affairs for five years ahead, the system of which we are so proud, is surely one which should run all through university administration to the maximum extent possible. The central administration must of course keep budgets and capital commitments within bounds and watch general policy, but the head of a department with his staff should, as far as possible, be free to decide whether he wants to spend his money on another lecturer or a cyclotron, on books or a building.

With all the relief which might be gained by devolving more responsibility, a good deal of the complexity would remain which we must accept, and the other question we ought to explore, it seems to me, is whether we are getting enough skilled administrative help in the departments. This new position has grown on us; are we adopting measures to cope with it as fast as we might? There generally exists in a larger department some senior lecturer who, while an excellent teacher, is more interested in administration than research. Responsibility for time-tables, the organization of laboratory work, examinations, entries, preparation of the budget can be loaded on to him, but in fairness he ought to be given some definite title such as assistant director, and a suitable addition to his salary as a recognition of what he is doing.

Again, and I can speak from experience in a heartfelt way, a large department gains enormously by having a full-time secretary whose status is that of a staff member. The university has given the Cavendish such a secretary, and since we have had him my outlook has been quite transformed. He sees to everything in the department except questions involving research, teaching and assessments of students, where he does not encroach on the responsibilities of the academic staff. In a large department like ours with a budget of £150,000 a year, such an appointment is a vital one.

The same principle, however, holds all through. In sections of a large department, or in a small department, the same advantage can be gained by providing a first-rate woman secretary. She should not be regarded as a typist; she is there for her brains and not for her fingers, and should have a corresponding status. If the leader of the section has such help to keep engagements, look after the accounts, keep the files and so forth he is twice as effective a man. It is not an extravagance, but a real economy.

To summarize, I feel that we are caught up at the present time in rather a new state of affairs owing to the unavoidable growing complexity of our administrative work. If the position is not watched the quality of the teaching and research will suffer greatly, and there cannot be a more important and urgent problem than trying to lighten the administrative burden, subject to the overriding consideration that we must keep the control of policy in the hands of the academic staff. We should try to devolve all decisions to the lowest possible level, and we should see that the routine administration is as far as possible carried out by assistants trained for such work and not by the academic staff. The position needs careful watching, because teachers and research workers are so very defenceless against the encroachment of administrative claims on their time. Everybody likes to be thought businesslike; it is much easier to answer letters than it is to have a great thought. We need to be protected, therefore, against ourselves.

The CHAIRMAN: Now, to see ourselves as others see us, I call on Sir Reginald Verdon Smith, Chairman of Council, University of Bristol.

Sir REGINALD VERDON SMITH (*Chairman of Council, University of Bristol*): It was with more than ordinary diffidence that I yielded to the gentle imperative of the Vice-Chancellor of the University of Bristol and agreed to speak at this Congress and on this subject. I start with a request for your indulgence. All around I see delegates whose experience of university administration, not to mention academic duties, is far more profound and far more catholic and far more factual than my own, so please accept my contribution this afternoon as essentially a few runs snatched by an amateur at the game rather late in the innings, rather than the polished expertise of the professional. And in lighter vein I also make a claim on your sympathy in that I am speaking immediately after so distinguished a scientist as Sir Lawrence Bragg who has in this academic setting taken such an opportunity of playing with the sentiments and the emotions of his audience, when one might have expected of him a more objective approach.

Despite the way in which he has called forth in your minds all these anxieties—from which, I may say, others in other walks of life also suffer—I should like to bring you back to a different point of view, and it is this. Here we are at a stage in our affairs at which a number of changing circumstances have faced the universities with something of a new difficulty in their administrative pattern. I have noted in the summary given in the programme half a dozen points

which seem to me to bring this matter into particular prominence at the present time, and in the last few days we have had the benefit, as we were reminded this morning, of the University Grants Committee's report on the last quinquennium.

You will have noticed that several paragraphs of that report have an important bearing on our present subject. One matter in particular to which the Chancellor of the Exchequer referred this morning, earmarked grants, touches in one way or another nearly all the main aspects of university administration, all the way from competent book-keeping to the basic problem which I have rather ponderously labelled 'authoritative discrimination among competing claims upon resources'. It is impossible not to be acutely aware of the importance of good university administration as a vital factor in the relations between the universities and the state, and I will go so far as to say that our success in balancing the claims of the state and the tradition of academic freedom will be to a large degree determined by the wisdom and skill shown by universities in the form and exercise of their administration.

This may seem to some of you to be a pedestrian approach to a great matter, but I do sometimes get the impression that the academic's approach to practical administration rather easily grows over-complicated and is confused by a tendency to take refuge in first principles. In the first place, I have noticed that it is sometimes feared—and this, I am well aware, is not by any means confined to universities—that if the machinery of government is efficient it will inevitably interfere with individual freedom, from which it easily follows that the worst administration is the best. Possibly an extensive programme of research into the practice at universities would be found to justify this belief in anarchy, but until I am influenced by substantial evidence I shall continue to hold the opinion that good administration is as beneficial to universities as it is to other complex organizations, and that the practice and development of good administration are worth considerable attention.

It is probable that during the past few years of growth and change many of the anxieties which universities, especially in the United Kingdom, have experienced, and have sometimes caused to others, including the government, have had their origin not in difficult issues of policy but because the administrative machinery has been in the process of reconstruction to meet new demands, and they have been extremely hard pressed.

In this connexion I venture to suggest that to-day's subject really embraces two matters quite different in character. By 'administration' we sometimes mean the process and machinery of policy-making, and sometimes just plain housekeeping, the housekeeping

of Dr Veale's 'harmless drudge'. I say 'plain housekeeping', but in fact it is a subject which, though mundane, in inescapable, and therefore, like the drains, is of some importance.

Policy-making is at all times difficult, and demands qualities of judgement and vision, a capacity to combine the exercise of authority with the play of public opinion both inside and outside the university. But policy-making is, as Dr Veale said, generally made a great deal easier if the housekeeping is competent. For this reason I should like, even at the risk of appearing to descend a long way from the high level of the previous discussion, to spend a few moments on university housekeeping.

In passing, I would refer to university procedure. I have the impression that those viewing universities from outside, or those who have not taken a detailed view of the practice in universities, have the impression that universities make life unduly difficult for themselves by the complexities and perhaps the antiquities of their procedure; and, indeed, Sir Lawrence's experiences here and there seem to bear out that general impression about the troubles of committee procedure; but I believe that in universities in fact procedure is not a serious problem. Today, as the Chancellor of the Exchequer reminded us, procedure does give place to the requirements of sensible people to a remarkable degree; even in the law I do not think it could be said with Maitland that the forms of action still rule us from the grave, and in the same way I should not expect to find that procedure as such makes university administration more tiresome than it need be to the academics.

Going back to housekeeping, however, the University Grants Committee, in their report on the years 1935–47, expressed considerable alarm at the very heavy demands made by administrative duties on the time and energy of professors and heads of departments, and they suggested that all universities would be well advised to review their administrative arrangements with the object of relieving their professors and heads of departments of any duties which do not necessarily demand their personal attention. In expressing this anxiety, the Grants Committee were primarily concerned with the daily running of departments and not with the formation of policy. It would be interesting to learn whether universities concur in the Grants Committee's diagnosis, and how much has been accomplished by way of improvement.

For example, how far have the accounting systems of universities been brought up to date, so that instead of a useless collection of obsolete financial records the accounting officers provide current information on income and expenditure of a useful kind? How far have universities been able to go in arranging for the provision of

buildings and equipment in terms of a detailed long-term programme, so that expenditure is regulated and delays and interruptions to work minimized? The operating costs of halls of residence, the catering and allied services and so on can, as we know only too well, easily involve serious deficits. These are some of the simple matters which, if badly administered, absorb an unconscionable amount of academic time but which, if well administered, render it unnecessary for the committees of which we have heard so much to meet at all, even with only a short agenda, so that their members can use their time more profitably in other directions. Again, most large organizations have found that the concentration of certain administrative activities can yield useful savings in cost, as well as in stress and strain on those not properly qualified to attend to them.

These are typical examples of housekeeping problems, and they involve periodical attention to organization and method, the use of modern office equipment, of costing and recording techniques, and above all the selection and training of suitable staff for the purpose. It is noticeable and satisfactory that since the war the universities of this country have paid much more attention to the selection and training of their administrative staff. The study of and moderate expenditure upon good administrative practices can almost certainly save the time of academic staff, and I believe that additional encouragement to attend to these matters would be fruitful.

Some may suspect that these suggestions imply a wish, natural if one has in mind precedents drawn from industrial administration, to create a powerful centralized authority. This is by no means my intention. No doubt there is room for much discussion with regard to the relationship between the central administration of the university and the departments. Practice differs widely. I doubt whether there is any golden rule to be followed, other than that those concerned with administrative work, whether at the centre or at the periphery, will be successful only where they gain the confidence of the departments which they serve.

The process of specializing and concentrating the university's services undoubtedly raises potential dangers whenever the responsibility of an individual or a department for their students is curtailed. This risk has been noticed in connexion with appointments departments and student health services. The university's task in such cases, where the benefits of these specialized services have proved themselves, would appear to be by committee work and by informal contacts to secure that an effective link is maintained, and that departmental heads and tutors do not lose interest in this aspect of their students' progress because they no longer have a direct responsibility for their health or their future occupation.

Another administrative matter which will have increasing significance is in the field of staff management, and arises from the increasing number of non-academic employees who form part of large scientific departments but who have not acquired any special loyalty to the university as an employer as compared with other possible employers such as industry and government establishments. There will be an inevitable increase in formal negotiations with representatives of this important group of university servants. In other places this subject has generally been found to be a matter for specialized knowledge and experience, and it is unlikely that the case of the universities will be different. It is desirable that such negotiations and agreements should be so far as possible local and particular rather than national, and it is therefore additionally important that they should be treated with discretion and skill.

I make no apology for mentioning these apparently secondary matters, because experience shows that they are liable to become a nuisance if not recognized and accommodated; but, even given good housekeeping, the major administrative problem of policy-making remains.

The making of policy seems to me exceedingly difficult for a university in comparison with almost any other organization. Traditionally negative in concept, university government is being obliged to become increasingly capable of positive decision and action, and yet this must happen without over-centralization. Matters of policy requiring this capacity for positive decision are raised by, for example, developments stimulated by government policy, a matter which was mentioned to us this morning, or by developments desired by a section of contemporary opinion. I have in mind very much the pressure on universities to develop courses in management studies. How? When? Where? Why? These are all questions which require and demand a policy answer, and both these and the former group seem to me to require the development of authoritative discrimination, however unpopular that may be in departmental contexts. We may also note developments which lie in between existing departments, where the university has to recognize a need and provide for it by adaptation or extension.

By what criterion does a university decide its policy in such matters? Neither financial sanctions nor an objects clause in a memorandum of association provide decisive answers; and, though one must note that the compelling incentive of competition between universities is surprisingly often in evidence as a criterion for action, I do not think that one can admit competition as a legitimate factor in university policy-making. The older universities may feel able to claim with justice that the tradition of sound judgement in

determining major policy is theirs by inheritance, so that no serious difficulty is experienced in reaching wise conclusions, but others have possibly not yet acquired this background and can easily make mistakes which have far-reaching consequences.

For each of the latter it is of considerable importance to cultivate what may be described as a corporate view of their university's place in society, and to develop the habit and discipline of studying in the round the contributions which it can best make to the community it serves. This corporate view will secure its strength from many sources, but chiefly, I believe, from the conscious development of a quality of broad-minded statesmanship among the academic leaders of the university. In this development the authority and leadership of the vice-chancellor will be a paramount influence, and he in his turn, by virtue of his office, has not only the opportunity but the duty of creating and maintaining this sense of corporate purpose in a group of people otherwise naturally inclined to concentrate on their sectional interests.

In the years ahead, which we are told to regard as a period of consolidation, the cultivation of corporate purpose amongst academic specialists will be the most important task in university administration, because in a society of increasing specialization it is for the universities to remember and to cultivate within their own ranks the many-sidedness of man, and thus to preserve for posterity that sense of the unity of society which we have inherited from the generations before us.

DISCUSSION

Professor H. R. Burrows (*Natal*): The main value of my contribution will be its brevity, but I would underline an important and understanding view expressed by Sir Lawrence Bragg on the question of administrative duties carried out by university teachers. It is clear that routine duties can become very time-consuming, not only directly but also indirectly, because of the fragmentation of time and effort, with the result that a university teacher tends to lose his real function and become mainly a second-rate administrative official. In my own case I was very tempted to resign my post last year in order to read economics. I should say that I occupy a chair of economics—but mainly at university meetings and without many of the previously suggested flashes of inspiration!

From my own experience it seems that many, if not most, deans of faculties are torn between a sense of duty and a yearning for some relief from exasperating interruptions to academic work, particularly

serious for research. I do not know the solution. Some technical assistance is no doubt needed, and heads of departments also would seem to need secretarial and clerical assistance, the amount of which would no doubt vary with the size of the department and the amount of research and contacts with outside organizations.

Doubtless all this is only too well known, but I would enter a strong plea for adequate technical and clerical assistance to help university teachers in the administrative side of their duties. In view of the growing burden of university routine meetings of all kinds, one is tempted also to suggest a little reduction in the internal democracy of the university in the interests of greater efficiency and scholarship.

I am tempted to refer to Dr Veale's reference to the value of impartiality of even 'harmless drudges' and to recall a story told by Lord Hailey last week of a newly elected mayor who in his inaugural address promised faithfully to steer between reasonable partiality on the one hand and absolute impartiality on the other.

Professor A. Boyce Gibson (*Melbourne*): The balance in the work of a university teacher between administration and teaching and research is a very difficult one to keep. I have a feeling that in one or two of the previous speeches I have detected rather too much reaction against the responsibilities of a university officer for administrative work. I have been a sacrificial victim myself for the last three years as chairman of a professorial board, and I am extremely glad that that period is over; but it would be a very bad thing if someone were not a sacrificial victim of that kind, all along the line. The price of liberty is eternal vigilance. We have to keep on doing a great deal of this work ourselves, if it is to be done in the way in which we want it to be done. If we toss it to other people, they cannot be blamed if they do it in their way; while if we toss it to other people and then do a spot of 'back-seat driving' we are behaving in a thoroughly unsportsmanlike way.

I yield to no one in my desire to pursue my own research and to take a proper part in the teaching of my students. It is only because the balance in these matters is very delicate, and some of the previous speakers seem to have tilted it rather far one way, that I put in this mild plea for continued participation in administrative duties. I agree entirely that we want all the mechanical aids that we can get, and I would add that we ought to cultivate more than we have learned to do the habit of devolution and the making use of the members of our own staffs for specific and minor administrative duties; and just in order to participate as I think we should in the administration of universities we should take these matters of technique in hand, and then perhaps we shall be able to make the

best of all these competing worlds. It is going to be very hard, but I think that we should try.

Professor W. H. HUTT (*Cape Town*): I feel very much in sympathy with what Sir Lawrence Bragg and Professor Burrows have said, but, like the last speaker, I realize that we cannot really have a democratic and liberal university unless the teaching staff do take a part in administration, so that they can be continuously vigilant. It is a dilemma. In almost all universities that I know anything about the burden of administration seems to be unduly large: I mean that the right system could lighten the burden considerably. I sit on many committees where for four-fifths of the time, at any rate, I am bored. I know that it is my duty to be there and to be vigilant, but with, say, questions of concessions in departments which do not concern me, or questions of amendments of regulations and so on, I often feel that I am wasting my time. I look round the room and see that a dozen people are present, and sometimes twenty or thirty—all expensive people—the great majority of whom, I know, are longing to get back to their work in the laboratory or the library.

That is the problem. Personally, I should be absolutely content to trust the principal, or the registrar, or other officials on the staff to make the right decision on such points. In almost all cases they would come to the same conclusion as the committee; and if we had the right in the Senate or the General Purposes Committee to scrutinize the decisions taken and see that they satisfied us, we might find the solution for which we are looking in this kind of delegation.

We must not forget that there is a minority of people—in some universities perhaps a majority—who use the fact of heavy administrative burdens as an excuse for not being able to get on with research. We know that people like Sir Lawrence Bragg and Professor Burrows do not fall into that category, because in spite of the burden they do produce important work. But the type of person to which I refer does exist. Their complaint is that they are unable to produce original work first of all because of the weight of teaching duties and secondly because of administrative duties. Such people are sometimes useful; they like administration, and sometimes they may be the people to use for it; but for the rest of us this question is a very serious one.

The CHAIRMAN: Before I close the meeting, I am sure that it is your wish that I should thank all those who have taken part in the discussion, not only the opening speakers but also those who have spoken afterwards.

Wednesday, 15 July

ACADEMIC MOBILITY IN THE COMMONWEALTH

'WHAT SUBJECT OR SUBJECTS TODAY ARE BEST FITTED TO FULFIL THE ROLE PLAYED PREVIOUSLY IN THE UNIVERSITY CURRICULUM BY THE CLASSICS?' (1)

EXTRAORDINARY GENERAL MEETING OF THE ASSOCIATION OF UNIVERSITIES OF THE BRITISH COMMONWEALTH

SESSION ON ACADEMIC MOBILITY IN THE COMMONWEALTH

(including plans for the Commonwealth Interchange Scheme)

Chairman: SIR CHARLES MORRIS

Vice-Chancellor of the University of Leeds and Chairman of the Committee of Vice-Chancellors and Principals of the Universities of the United Kingdom

Opening Speakers:

DR BASHIR AHMAD (*Vice-Chancellor of the University of the Panjab, Lahore*)

DR R. O. BUCHANAN (*Professor of Geography, University of London*)

SIR JAMES MOUNTFORD (*Vice-Chancellor of the University of Liverpool*)

SUMMARIES OF ADDRESSES

As well as the following summaries, provided by the opening speakers, which were printed in the Congress programme, the meeting also had for consideration the papers on the Commonwealth University Interchange Scheme and on Superannuation which are printed in this volume on pp. 275–295.

(*a*) DR BASHIR AHMAD

Academic mobility is an important means to achieve a more uniform development of higher education in all parts of the Commonwealth. It is an important step for the promotion of Commonwealth solidarity and a better understanding among its peoples. It also constitutes an effective means of assistance to under-developed areas of the Commonwealth in their efforts to raise their standards of education, their standards of living and to recognize the dignity of man. For these considerations academic mobility needs to be promoted in all possible ways. Within the Commonwealth fortunately there are no obstacles to the travel of academic or scientific persons such as exist in several other countries, like security regulations, visa hurdles, or shortage of monetary exchange. There are, however, administrative

and financial difficulties which have so far restricted movement of academic people. Liberal and judicious planning and active financial support of the Commonwealth governments is needed to develop a more extensive programme of academic mobility. The United States government has given a lead in this matter by promoting educational co-operation between the United States and friendly countries through numerous programmes. Government action from which such effective programmes have resulted is exemplified in the Buenos Aires Convention (1937); the Philippine Rehabilitation Act (1946); the Fulbright Act (1946); the Smith-Mundt Act (1948) and the Foreign Economic Assistance Act (1950), the last one resulting in the extensive Point IV programmes and the creation of the Technical Co-operation Administration.

Pakistan universities generally suffer from a serious lack of qualified and experienced teachers, equipment, and funds for buildings and other needs. The Panjab University of which I can speak more specifically, has urgent need of all these while it is considerably expanding its teaching and research activities to meet the needs of a rapidly developing new country. The Panjab University is also trying to introduce a measure of university reform to give it a sound and stable administration, to eliminate conflicts and to allow it to develop smoothly and freely. It stands in need of a system of financial support which will ensure for it adequate funds to meet its legitimate needs, avoiding any undue interference in its autonomy and to provide a basis of confidence to the government. The need for effective contact with university leaders in the Commonwealth and a keen desire for their association in helping to solve its problems and difficulties was never more urgent than at this moment.

None of the Pakistan universities has appreciably benefited from the Pakistan government's development schemes or technical assistance offered by other friendly countries. The field of economic development, such as the development of agriculture and food production, certain key industries, power resources, has effectively pushed the university needs to the background. The government's overseas training scheme, and the large number of fellowships and scholarships available from various sources have largely gone to develop institutions and agencies other than teaching much less universities. Nor have the universities of under-developed countries of the Commonwealth been helped through teacher-student exchange schemes, or the university secondment scheme. The question must be seriously asked whether a more effective machinery could be devised to help the universities of under-developed countries such as Pakistan more substantially and to promote academic mobility for the objectives mentioned earlier.

Programmes for academic mobility within the Commonwealth need to be carefully planned and developed and active support of Commonwealth governments obtained for their implementation. These would follow recognized lines such as

(i) Active educational co-operation between Commonwealth universities, particularly between those of advanced and under-developed countries. This should take the form of

(*a*) sisterhood relationships between institutions with common interests on the lines of Technical Co-operation Administration;

(*b*) visiting professorships;

(*c*) teaching and research fellowships;

(*d*) mutual exchange of information and advice on development plans; and

(*e*) exchange of books, literature, material and specialized equipment.

(ii) Provision of facilities for participation in International Conferences and symposia within the Commonwealth.

An administrative authority for university assistance under the Commonwealth Universities Association should be organized to plan and to implement the programmes which are evolved. Financial support for these programmes may be obtained out of the Colombo Plan funds. So far, in spite of the fact that considerable technical assistance under this plan has been provided to governments of under-developed countries, there has been no separate allocation for the universities. Under these conditions the universities have not benefited. There is definite need for a separate allocation of funds for the development of universities and this assistance should be administered through the authority set up under the Association of Universities of the British Commonwealth which may deal directly either with individual universities or inter-university organizations in different member countries.

(*b*) PROFESSOR R. O. BUCHANAN

This paper will concern itself chiefly with regular staff appointments in the universities of the Commonwealth, since other aspects of the subject are dealt with in other communications. It will be argued that ideally the Commonwealth universities should form one common field for first appointments and subsequent promotions, implying readiness on the part of every university to make an appointment from universities in other parts of the Commonwealth and freedom

for the teacher to move at any and every stage of his career anywhere within the Commonwealth. That ideal can hardly be wholly attained in practice, but a closer approximation to it than has so far been achieved is surely possible. The paper will consider some existing obstacles to free mobility, especially to the making of appointments from overseas to United Kingdom universities, and also the machinery available for facilitating movement. Suggestions will be made for improvement in the use made of that machinery and for the improvement of the machinery itself.

(*c*) SIR JAMES MOUNTFORD

The resolutions regarding facilities for interchange visits between Commonwealth countries were perhaps the most important decisions taken by the 1948 Congress; certainly the scheme of travel grants financed by the Commonwealth Relations Office, acting through the British Council, is an outstandingly practical result of that Congress. The scope of the scheme has been determined by the money available and by decisions about the most effective use of resources; and the Committee entrusted with the administration of the scheme has had to consider the merit and urgency of individual cases in relation to the geographical allocation of awards. Within these limits the scheme has been an undoubted success, and has achieved some part of the objects the 1948 Congress had in mind.

The experience of the last five years, however, has clearly indicated that the potential benefits to be derived would amply justify a much more extensive scheme of awards. In particular there is need for an increase in the number of visits to and from the United Kingdom, for a cross-way traffic between Commonwealth countries overseas, for the inclusion of the Colonial universities, for the financing of short-term visits, and for a greater provision for holders of postgraduate research grants. Good as the present scheme may be, it is not good enough if the resolutions of the 1948 Congress are to be fully implemented; it ought to be expanded in all directions at all levels.

The widening of the scope of the scheme, however, raises a number of problems of finance and administration, some of which can perhaps only be settled at a high policy level in the individual countries of the Commonwealth. These problems have to be faced and the report which is submitted to the present Congress offers some carefully considered suggestions for their solution.

It is vital for the future of any scheme of interchange between Commonwealth universities not only that the Congress should give its firm support to these proposals or to any alternatives which may seem desirable, but also that the universities within the separate countries of the Commonwealth should undertake to do all they can

within their own spheres of influence to secure the adoption and implementation of the considered policy of the Congress.

ADDITIONAL AGENDA: DRAFT RESOLUTIONS

The following resolutions of the Conference of executive heads of member institutions of the A.U.B.C., held at Durham on 6–10 July, were referred to this session of the Congress:

1. *Resolutions on Inter-University Relations passed at the Sixth Congress in 1948.*

The Conference received reports of the progress made during the quinquennium in implementing these resolutions in the various countries; it resolved that universities and inter-university bodies should be urged to give more effect to them than has hitherto been possible, and on two of the matters covered by these resolutions it made special recommendations to the Congress as set out in 2 and 3 below.

2. *Superannuation*

The Conference discussed a memorandum by Dr D. W. Logan entitled 'The Effect of Superannuation Schemes on Mobility of Academic Staff within the Commonwealth', which it decided to circulate to the members of the Congress [see Appendix III] with the following suggested resolution:

'In order to facilitate the movement of teaching staff between the universities of the Commonwealth, the Congress recommends that all superannuation authorities should make provision in their schemes so that a university teacher, when appointed to the staff of another university, shall be entitled to take with him the full actuarial value of the benefits which, under the Superannuation Scheme in force in the institution which he is leaving, have accrued to him during his period of service, or to which he could have become entitled in respect of that service.'

3. *Commonwealth University Interchange*

The Conference recommended that the Congress should resolve:

'(1) That the thanks of the Congress be expressed to the Commonwealth Relations Office and to the British Council for the generous institution of a pilot scheme for Commonwealth University Interchange so soon after the resolution of the Sixth Congress in 1948 which agreed that the various governments and official bodies be asked to provide a fund to assist academic travel within the Commonwealth.

'(2) That the Congress considers that the initial scheme has operated as a valuable supplementation of grants and arrangements

made in various countries for leave abroad and for inter-university visits, and has been of great benefit to universities in all parts of the Commonwealth; and that the Congress hopes that the provision of funds will be maintained to enable the experiment to be continued through the next five years.

'(3) That the universities of each Commonwealth country are recommended to seek suitable opportunities for approaching their government with a request that it should make a contribution to a co-operatively administered Commonwealth Interchange Fund to enable the present pilot scheme to be continued and expanded, especially in relation to grants in Category B (Distinguished Visitors) and to grants for travel between the overseas Commonwealth countries.

'(4) That the Congress hears with pleasure that funds are being made available by the United Kingdom government to make possible the assistance of interchange visits between universities and university colleges in the Colonies and universities in the other Commonwealth countries and desires to express its earnest hope that such arrangements may receive support also from the governments of the Colonial countries themselves and may be brought closely into the scheme under the proposed Commonwealth Interchange Fund.'

OPENING ADDRESSES

The CHAIRMAN (Sir CHARLES MORRIS): We have before us today, in addition to the subject for discussion, the additional agenda papers which have been circulated, and which include three resolutions [see above]. I propose, if you agree, to take first resolution No. 3, on Commonwealth University Interchange, which is in four parts, and to closure the discussion on it at about 12 noon. After that we will take No. 2, on Superannuation. Dr Logan tells me that he does not expect that the Congress will take long over this question of superannuation.

I am particularly pleased to have the privilege of being in the chair for the discussion of this subject of academic mobility in the Commonwealth. It is fairly clear that we all think that the maintenance of personal relations, the keeping up of personal visits and friendships, between universities is of the very greatest importance. I had the privilege myself more than a quarter of a century ago to go as a professor to one of the great state universities in the United States for a year. While I could not claim that I was able to do very

much for the people at that university, it undoubtedly profoundly affected my whole life. I feel very strongly about this, and I know that members of the Congress do too. The Congress at Oxford in 1948 passed resolutions on this subject, and some action has been taken; indeed, as has emerged in previous discussions, a great deal has been done in the past five years. There is now very much more movement between universities than formerly, and there is a great desire that this should continue for all categories of people—heads of universities, deans, heads of departments, professors, leading scholars, young scholars and undergraduates. The discussion this morning, therefore, is probably of great importance, and it is particularly pleasing to me to be in the chair.

The opening speakers have agreed that Dr Ahmad shall speak first, Dr Buchanan second, and Sir James Mountford third. Sir James will speak to resolution No. 3 to which I have already referred.

Dr BASHIR AHMAD (*Vice-Chancellor of the University of the Panjab, Lahore*): When the Secretary of the Association of Universities of the British Commonwealth wrote to me to ask me to be one of the opening speakers in a discussion on academic mobility, I wondered what would be the most appropriate aspect of this rather extensive subject about which to speak. It seemed to me that it would be naturally suitable to present this subject to you as we see it in Pakistan and to speak of such matters as are of particular interest to Pakistan universities, or for that matter to other universities in that region.

Speaking very broadly, it is obvious that the movement of academic persons is of importance for the promotion of Commonwealth unity and solidarity and to achieve a better and fuller understanding amongst its various peoples. In the Commonwealth, in spite of many common characteristics and traditions, there is considerable diversity, and this diversity makes of vital importance the mutual understanding of differences.

The universities are the fountain-heads of civilization. They are the nurseries of freedom of thought and intellectual adventure. In the realm of ideas and the maintenance of standards and moral values they occupy a unique position. They are the places where the future citizens and the leaders of tomorrow are trained. It is therefore essential that university teachers and university students should acquire through personal contact an appreciation of the traditions of British universities and a sense of the reality of the British Commonwealth of Nations. This is one important reason why academic persons in universities all over the Commonwealth should be provided with opportunities for close personal contact with each other.

Real unity and solidarity can develop only between equal partners. There are many parts of the Commonwealth which are exceedingly under-developed, both academically and educationally. As long as such big differences exist, the Commonwealth cannot develop the feeling of oneness which it should have. It is therefore imperative that the under-developed areas of the Commonwealth shall be rapidly and effectively helped to reach a certain minimum standard of development, both in the economic and in the intellectual fields. In such areas there is a wide awakening to their needs and their deficiencies. The people in these areas and their leaders are making frantic efforts to raise their standards of living and education and to recognize the dignity of man. It is in the interests of the Commonwealth as a whole to offer them the assistance which they need. That assistance is not necessarily financial, and they will sincerely appreciate any help which is given them.

It is also highly desirable that there should be a uniform development of higher education in all parts of the Commonwealth. That is essential so that the Commonwealth as a whole may progress and no part of it act as a brake or drag on the rest. Each part of this unique group of nations should pull its own weight and make its own contribution to keeping the Commonwealth in the vanguard of human progress.

For these reasons amongst others—for the unity and solidarity of the Commonwealth, to provide effective help to its under-developed areas, and in the interests of the uniform development of higher education in all parts of the Commonwealth—it is essential that wide personal contact between scholar and scholar be promoted. This will not merely help the development of universities in the under-developed areas but will enrich university teaching and research in the more developed parts; and this will make the Commonwealth universities a commonwealth of learning, and as active members of this association of learning the universities will fulfil more effectively their proper functions.

Positive action for the promotion and development of programmes of academic mobility in the Commonwealth is necessary. Fortunately, there are no obstacles to the travel of academic or even of scientific persons within the Commonwealth such as exist in several other countries, for example, security regulations, visa hurdles or shortage of monetary exchange, but there are administrative and financial difficulties which have so far restricted their movement. Liberal and judicious planning and active financial support of the Commonwealth governments is needed to develop a more extensive programme of academic mobility. The United States government has given a lead in this matter by promoting educational co-operation

between the United States and friendly countries through numerous programmes. Government action from which such effective programmes have resulted is exemplified in the Buenos Aires Convention (1937), the Philippine Rehabilitation Act (1946), the Fulbright Act (1946), the Smith-Mundt Act (1948), and also the Foreign Economic Assistance Act (1950), this last resulting in the extensive Point IV programmes and the creation of the Technical Co-operation Administration.

It is very desirable that Commonwealth governments also should take positive action in the development of similar or suitable programmes. It is also for the A.U.B.C. to direct the attention of the Commonwealth governments to this very important and urgent need.

If I may once again refer to Pakistan, university education needs considerable development in our young Dominion. At the time when it secured its independence, Pakistan had only two universities. Recently three more have been established, and one other is about to be established, making a total of six. Perhaps they have come into existence too rapidly. All of them suffer from a serious lack of qualified and experienced teachers, equipment, and funds for buildings and other needs. The Panjab University, of which I can speak more specifically and which is the oldest and largest, has urgent need of all these—teachers, equipment and funds. It has recently had to expand considerably its teaching and research activities to meet the needs of a rapidly developing new country. The Panjab University is also trying to introduce a measure of university reform to give it a sound and stable administration, to eliminate conflicts and to allow it to develop smoothly and freely. The university also needs a system of financial support which will ensure for it adequate funds to meet its legitimate needs, will avoid any undue interference with its autonomy, and give confidence to the government that the funds provided for the university are being put to good use. The need for effective contact with university leaders in other parts of the Commonwealth was never so urgent as it is today, and there is a keen desire for their association in helping to solve its problems and its difficulties.

None of the Pakistan universities has appreciably benefited from the Pakistan government's development schemes or from the technical assistance offered by other friendly countries. The field of economic development—the development of agriculture and food production, of certain key industries, of power resources and so on—has effectively pushed the university needs into the background. The government's own overseas training schemes and the large number of fellowships and scholarships available from various sources have largely gone to develop institutions and agencies other than teaching,

much less universities. Nor have the universities of the under-developed countries of the Commonwealth been helped through teacher-student exchange schemes or the university secondment scheme. The question must be seriously asked whether some more effective machinery can be devised to help more substantially the universities of under-developed countries such as Pakistan. The only answer is promotion of programmes of more effective co-operation and greater contact between university teachers, students and university administrators of the under-developed countries with Great Britain and other Commonwealth countries.

To help the universities of the under-developed countries more adequately and effectively, it seems to me to be essential to set up an administrative authority or organization to plan and to implement programmes of university co-operation and assistance. Adequate financial support of the Commonwealth governments should be available to this authority. This authority might function as part of the A.U.B.C. or in close association with it.

The Colombo Plan embodies as one of its main objectives technical assistance to the under-developed countries of the Commonwealth. This includes the training of technical personnel, the provision of technical equipment, the provision of specialists and experts both for advice and for the implementation of programmes of economic development. I do not see why the development of higher education and the development of the universities should not be a part of this programme. The most effective way of providing technical assistance is the development of training institutions. The large numbers of technical personnel needed by any country cannot be trained overseas; at least a certain level of technical training must be available within each country. The scientific and technical departments of the universities can fill this requirement if they are helped adequately to develop and to expand. So far, in spite of the fact that considerable technical assistance has been provided for the under-developed countries, the scientific and technical departments of the universities have not been given the help which they need. This can be done only if a separate allocation of funds is made for this purpose. If an administrative authority for assistance to universities, such as I have proposed, is set up, an allocation could be made to it by the Commonwealth governments from the Colombo Plan funds, and then the authority could begin to function immediately.

A programme of assistance to the universities could be organized along the following lines. First, there should be active educational co-operation between Commonwealth universities, and particularly between those of advanced and under-developed countries, to take the form of (*a*) visiting professorships; (*b*) teaching and research

fellowships; (*c*) interchange of distinguished scholars and young teachers; (*d*) mutual exchange of information and advice on development plans; (*e*) the exchange of books and other literature, materials and specialized equipment; (*f*) the establishment of sisterhood relationships between institutions with common interests, both for teaching and research, and also examinations. This could be on the lines already proposed by the Technical Co-operation Administration in the United States, or such as exist between London University and certain Colonial institutions. Secondly, the provision of facilities for participation in international conferences and symposia and other programmes of educational co-operation within the Commonwealth.

Dr R. O. BUCHANAN (*Professor of Geography, University of London*): My share in this discussion is limited to only one facet, albeit, as I believe, a very important facet, namely, that concerned with recruitment to the regular teaching staffs of our universities. The prime assumptions are that the particular personality and character of the individual university, which is always significant and sometimes very striking, is set in a Commonwealth matrix of a community character, and that it is precisely this unity in diversity which makes desirable the constant interchange of teachers on something more than temporary appointments, and which conditions the effectiveness of their influence in their new spheres of action. This community character derives in part, no doubt, from the mere fact that universities *are* universities, but in very large measure, though with notable exceptions, it reflects a general inheritance of British traditions of university education, university organization and university aims and ideals.

In parenthesis, I would ask you to notice that in saying 'British' I am not unmindful of the distinctiveness of the Scottish and the English contributions, and I am aware that in some areas of our Commonwealth and in some aspects of our Commonwealth university structure the Scottish pattern has been followed more closely than the English. That, however, does not destroy the essential unity of the British contribution to overseas universities as a whole.

We have, then, common interests and common aims. We have in large part, though again not wholly, a common language as our medium of instruction and of study, and we have a common ideal of standards to be reached and maintained in our work. I need not labour the point; it will, I think, be readily agreed that cross-fertilization of our labours by a freer international trade in university teachers will contribute to an abundant harvest. A good deal can, of course, be done, and is already being done, by the provision of visiting professorships and lectureships and by the establishment of

postgraduate scholarships, fellowships and research grants of various kinds. These are good so far as they go, but at the moment they work unequally. There is not enough money to meet the demands of overseas teachers and students wishing to come to the United Kingdom, while there is at the same time disappointingly little demand from United Kingdom university teachers and students on the funds available to enable them to go to other parts of the Commonwealth. This reluctance of British academic workers to widen their experience overseas is understandable as a defect of the very virtue of our British inheritance; it is none the less lamentable.

That comment, however, lies rather off the line of my proper task. My general point is that it ought to be possible for an established teacher at every stage in his career, and for a candidate for entry into the ranks of the university teaching profession, to compete for an appropriate post in any university of the Commonwealth on level terms with any other competitor, and, if appointed, to move without loss of any accrued benefits which he may have earned.

Such a system does in fact already exist in part, but only in part. The southern Dominions and the Colonial universities and university colleges do recruit freely from the United Kingdom, and machinery exists in the Association of Universities of the British Commonwealth and in the Inter-University Council for Higher Education in the Colonies to advertise vacancies widely and to help in sifting applications so that the best man, irrespective of his country or university of origin, may be fitted to the post. That system has, it may be claimed, worked well, and indeed the members here present from overseas institutions which have made use of those facilities will no doubt be ready to confirm that claim.

Following wide advertisement, very special pains are taken to assemble a competent advisory committee in London. Such a committee interviews a short list of candidates on the instruction of the appointing authority, or else makes up its own short list and interviews the people concerned. We have reason to believe that the careful reports, full and frank, made by these committees have been found to be very helpful to the appointing authorities. So far as I am aware, a misfit appointment following on such a report is at least as rare as a misfit appointment in a home university after an interview conducted by the home university itself.

It should be noted, however, that this procedure involves a great deal of work at the headquarters offices of the Association of Universities of the British Commonwealth and of the Inter-University Council for Higher Education in the Colonies. It takes a good deal of time, and it is essential, if the job is to be done properly, that overseas universities wishing to avail themselves of these facilities should

give the London end ample time in which to do the work properly. I may say that even in these days of air mail not less than two months clear in the London office is the absolute minimum if the job is to be done with the thoroughness which it deserves.

It makes demands, and quite heavy demands, on those members who serve on such advisory committees. I should like to say, as one who has so served, that members of those committees give their time gladly and freely, but it does involve them in a good deal of work and a good deal of travelling. It is essential that, if they are to feel assured that they are giving of their best to the university overseas, they should be as fully informed of the circumstances of the appointment as the appointing university can make them. It is relatively rare, for instance, for an overseas university to give information on how the vacancy arose or on the facilities for research that the appointee may find when he gets there, and there are various other fairly obvious items of relevant information about which a candidate may well inquire. Such information ought to be at the finger-tips of the interviewing committee if it is to pursue its work in any confident way.

That statement, indicating the share of the southern Dominions and of the Colonial institutions, shows the gaps that exist in the system, and I would add a word or two about the more prominent of those gaps. In the first place, Canada lies completely outside the system. Canadian custom, apparently, has never included open advertising of vacancies, and it would presumably require a major revolution to enable Canada to take part in any such arrangement as I have indicated. There is clearly nothing which we as an Association can do about that, but I may perhaps be permitted the personal reflexion that that is Canada's loss.

Secondly, India and Pakistan form a very special case, and some of the significant aspects of that case you have already heard this morning from Dr Ahmad. It is clear that for some time to come the current rapid expansion of university facilities in those countries will make very special demands indeed on trained man-power. It is surely desirable that the supply of that man-power should not be confined to the United Kingdom, but should be shared by the Dominions as well. There is both responsibility and opportunity in that matter, and the call of both the responsibility and the opportunity will appeal, I have no doubt, overseas as well as here in the home land.

Thirdly, the Colonial institutions do their recruiting mainly from this country. It is true that they do recruit also from the Dominions, especially from Australia and New Zealand, but one has the feeling that the proportion of Dominion recruitment into the service of the

Colonial universities is probably rather less than it could be and perhaps should be.

Fourthly, the real crux of the matter is here in the United Kingdom, where, broadly speaking, the universities do not make appointments from overseas. That is subject, of course, to occasional and notable exceptions. We all know about the man who makes a world reputation for himself in a far outpost of the Commonwealth and who is promptly invited to take the biggest chair that there is in this country; but that is the kind of exception that gives point to the rule.

That has unfortunate results not only, as I believe, on the home universities themselves, but also on the overseas universities. The belief that migration to a post overseas is equivalent to giving up all hope of a future appointment at home is a very real deterrent to the promising young man who might otherwise venture forth. It is true, of course, that the home universities have many overseas men on their staffs; almost without exception, however, these men came here as postgraduate students and obtained their initial appointment in a British university from inside a British university and not from their own university overseas. Let me say very emphatically, just in case I may be misunderstood, that there is no prejudice whatever in any university in this country, so far as I know, against the products of our Dominion universities, and the disability to which I have been referring applies with exactly the same force to British graduates who have gone overseas to teaching posts.

There are three major obstacles to the ready appointment of overseas men to British universities. Personally, I think that neither singly nor in combination should these three obstacles be allowed to be decisive. The first is that the British university seldom makes an appointment without interview. Again, that is not entirely without exception, but it is not customary to make appointments without personal interview, and quite obviously the overseas man can seldom be available here for interview. I would suggest that if the vacancies were advertised Commonwealth-wide—and some of our universities do in fact already make such wide advertisement—local interviewing committees in the overseas areas could act for the home university in exactly the same kind of way as the committees arranged by the Association of Universities of the British Commonwealth and the Inter-University Council act for overseas institutions. I have said that we have reason to believe that these London committees act very successfully, and I have no reason to believe that corresponding committees set up in Canada, Australia or South Africa would act any less successfully on behalf of a home university. It is, of course, true that it is sometimes more difficult in some of the over-

seas areas to assemble an appropriate committee, but it is rarely if ever impossible, and I am sure that the will will be there, as the will is here, to serve a common interest.

The second obstacle is that the home universities seem to be generally reluctant to advertise that they will shoulder any share of the removal expenses for overseas applicants. As a matter of fact, when they appoint from overseas they do, I think, always pay at least a considerable share of the removal costs, but they do not advertise beforehand that they will do so, and there is consequently, I am sure, a loss of promising candidatures by men who could not afford to move themselves over such long distances.

The final obstacle is the difficulty of transferring accrued pension rights to this country. Reciprocal arrangements are already common for men going to posts abroad, and they can take their F.S.S.U. rights with them to overseas appointments; but, as I understand it, facilities for the movement of rights in the reverse direction are not always available. In so far as that is true, it adds one more to the brakes that are applied to the wheel, and a very powerful brake it is. Already, however, preliminary work is being done on ways and means of securing release from its pressure, and we may hope that with patience and goodwill a practical solution will be found in due course.

The change in attitude and in procedure required of the universities in the United Kingdom for the purpose in view is nothing like so drastic as would be required from the Canadian universities, but it is nevertheless no small change. Equally, no other group of universities in the Commonwealth can exercise so immediate and so profound an influence on the common development. That, I think, we all take for granted. So let me conclude by saying this. The machinery already in existence and functioning smoothly and effectively in the interests of those overseas institutions that choose to make use of it could be readily expanded to cope with more comprehensive tasks, to the general benefit. The need and the opportunity, as I see it, are both there, and it is for us to see that they are not neglected.

Sir JAMES MOUNTFORD (*Vice-Chancellor of the University of Liverpool*): It is my task to submit and to comment on a report* issued by the Committee for Commonwealth University Interchange and circulated with the agenda papers for this Congress.

Among the resolutions passed by the 1948 Congress there was one which recommended the provision of funds by official bodies such as

* See Appendix II.

the British Council and the various governments for the following purposes:

'(*a*) to enable members of teaching staffs on leave to travel within the Commonwealth; and

'(*b*) to facilitate visits of distinguished scholars of one part of the Commonwealth to another.'

Within the last five years those resolutions have been implemented to this extent. The Commonwealth Relations Office has placed at the disposal of the British Council sums of money which have now amounted to almost £31,000; but there has been no contribution from other sources. The scheme inaugurated by the British Council is for travel grants for the promotion of interchange between universities in the United Kingdom and universities in other Commonwealth countries. That is rather more restricted in scope than the 1948 resolution, which could be interpreted as covering interchange between overseas Commonwealth countries themselves. The British Council scheme, however, goes a little further in one respect than the 1948 resolution, because it includes provision not only for members of teaching staffs on study leave and for what are sometimes called the 'academic princes', but also for postgraduate students.

The conditions under which these awards have been made have been very carefully drawn, partly on *a priori* grounds and partly as a result of experience. The Committee has endeavoured to allocate the funds available to the best advantage and to ensure that they are not used to save expenditure which universities would otherwise have been prepared to incur themselves.

The details of the awards which have so far been made are given in the appendix to the report [see p. 286]. It will be seen that 100 have been made for teachers on study leave, 31 for distinguished visitors, and 63 for postgraduate research workers. The geographical allocation is also of interest: 12 United Kingdom universities have participated, and 46 overseas universities. The cost of these travel grants varies very much, of course, according to the country to which they have been made. It is quite natural, in view of distances, that £8507 should have been devoted to Australia, and £5563 to New Zealand.

There are two points about the scheme which I should like to emphasize. The first is that it is supplementary to other provisions made by Commonwealth countries themselves. There are, fortunately, many visits outside the scheme which are entirely financed by universities or other organizations in the various Commonwealth countries. The second point is that the scheme is for travel grants only. The purpose is to enable a teacher on study leave, a distinguished visitor or a postgraduate student, whose other expenses are

being met from other sources, to meet the mere cost of transportation. It gives just that margin which sometimes makes all the difference when a person is thinking of going from one part of the Commonwealth to another. It may be relatively easy for a university to contemplate study leave with pay for six months or a whole year, and yet impossible to make the funds available for the member of staff to go to the United Kingdom or for someone in the United Kingdom to go to one of the Commonwealth countries. In such cases an award by our Committee is a deciding factor.

A further point is that this is a Commonwealth interchange scheme. There is a great deal of travel, of course, between the United Kingdom and other parts of the Commonwealth and the United States, but usually funds are available for persons of merit to visit the United States, and this scheme does not touch that very important field of activity.

We believe that during the last five years the scheme has been a very considerable success. Many tributes have been paid to it not only by the recipients but by others as well. It is a scheme which is of value not only to the visitor but to those who are visited, and its value should not be judged merely by its usefulness to the individual who receives the grant. It has a value which must be assessed in relation to the Commonwealth as a whole.

We have been impressed by the considerable growth of applications during the period under review. In 1949 we were able to meet about 50 per cent of the applications made to the Committee; at the present time we can meet only 25 per cent. From our experience we believe that there is still much more to be done within the present scheme; we also think that the scheme itself is not sufficiently wide in its scope. It does not include, for example, the Colonial universities; it is restricted to visits which are not less than six months in duration, though there are many instances where help for a shorter visit would be most valuable; there is need for an increase in the provision for postgraduate research students; and we have not touched upon the interchange between the overseas Commonwealth countries themselves—the visit of an Australian to South Africa or of a South African to Canada.

In compiling its report, the Committee felt that it would not be sufficient to confine its comments to pious murmurs of approbation. It therefore outlined in its report some suggestions for the future financing and administration of an expanded scheme. The minimum annual sum which the Committee feels should be at its disposal if it is to do its job adequately is £25,000. That is an amount three times in excess of what is at present available, and I think it must be obvious to the Congress that in order to secure funds of that magnitude the support of the whole of the Commonwealth will be necessary.

Without financial co-operation from all parts of the Commonwealth the scheme can remain only a pilot scheme within its present somewhat confined limits. The main features of the suggested administration for such an expanded scheme are that there should be a central fund administered by a Trust, a General Council to receive reports and annual accounts and to review policy, and thirdly an Executive Committee of an academic character.

When the executive heads of universities met last week in Durham we had an opportunity of discussing with the representatives of universities in the Commonwealth the financial and administrative arrangements which are suggested in the report. It was agreed that the present scheme has been of inestimable value in the matter of Commonwealth interchange, that it ought to be continued, and that if possible it ought to be expanded. It became evident, however, that local circumstances differ so widely that the detailed suggestions made in the report could not easily be implemented throughout the Commonwealth and that it would be unwise to ask the Congress to endorse them as they stand.

It is for that reason that I now ask the Congress to direct its attention to a series of resolutions [see p. 87] which were drawn up at Durham and have been set out in the additional agenda paper which is before you.

The first resolution is one of thanks to the Commonwealth Relations Office and to the British Council for the generous institution of this pilot scheme. I am sure that will be cordially acclaimed.

The second resolution approves the scheme and expresses a hope for its continuance. With that also there will be unanimous agreement.

The third resolution is the most important of them all. It has been carefully worded in the light of the circumstances and of the information given and the views expressed at Durham. It reads:

> '(3) That the universities of each Commonwealth country are recommended to seek suitable opportunities for approaching their government'

—we do not recommend that they should forthwith approach their governments; we must leave it to their judgement to decide when the time is ripe, though we use the word 'seek' in the hope that they will be positive in this matter—

> 'with a request that it should make a contribution'

—the amount of which we leave undefined; it might be proportional to the size of the university population or it might be, to begin with, a token payment—

> 'to a co-operatively administered Commonwealth Interchange Fund'

—the words 'co-operatively administered' were carefully chosen so as not to tie this Congress or the universities, or, by presumptuous implication, the governments of Commonwealth countries, to any particular scheme of administration, and certainly not necessarily to the scheme which is suggested in the report of the Committee—

> 'to enable the present pilot scheme to be continued and expanded, especially in relation to grants in Category B (Distinguished Visitors) and to grants for travel between the overseas Commonwealth countries'

—the two points especially mentioned being those for which the Commonwealth countries themselves felt that they had most hope of obtaining financial assistance.

The fourth resolution bears upon the Colonial universities. We heard during the meeting at Durham that funds were being made available by the United Kingdom government to make possible interchange visits between the universities and university colleges of the Colonies and universities elsewhere in the Commonwealth, and we ask the Congress in this resolution to express its hope that the arrangements may receive the support also of the Colonial governments, and that such arrangements may be brought into close relationship with the scheme under the proposed Commonwealth Interchange Fund.

Those resolutions represent the largest measure of agreement on this matter which is possible at the present time. It is not only the largest measure of agreement, but I am convinced that it is an important agreement at which we have arrived, if the Congress will accept our resolutions. The next five years are going to be quite vital for this matter of Commonwealth interchange, and particularly for this scheme of travel awards. I have no doubt that everyone in this Congress will be enthusiastically in favour of the continuance, and indeed of the expansion, of this scheme. The next five years will be a real challenge to academic solidarity within the Commonwealth in this matter, and the success which we manage to achieve will be a real test of the firmness of our purpose.

DISCUSSION

The CHAIRMAN: I am sure that the Congress will want to thank the opening speakers for their extremely clear and interesting addresses. They have covered a great deal of ground and have reminded us how much there is to discuss. There are evidently many members who want to speak, and the discussion is now open on all the field covered by each of the three speakers. I shall aim, however, to put the resolution on Commonwealth Interchange a few minutes before noon, and we shall take the resolution on the transfer of superannuation benefits as soon after 12 o'clock as possible.

Professor C. M. MACINNES (*Dalhousie*): I speak as a renegade Canadian, and there are one or two points which I should like to make. The first is that in the interests of the Commonwealth it is just as important, in my view, that the stream should run outward to the Commonwealth as that it should run inward. I have been aware recently of very great difficulties in obtaining funds to enable students to proceed from this country to countries of the Commonwealth. I should also like to suggest that in an assembly such as this we tend to lay emphasis on those who know everything about something and nothing about anything else, but there is a great deal to be said for the promotion of the movement of people who are not necessarily going to become researchers. I sometimes think that 'research' is the most abused word in the English language. It seems to me that for people who are going to enter the Church or to be journalists or to go into the Civil Service or take up other activities—really good people, and many of our people who are intellectually first rate do not take up research—it is very important to the Commonwealth that they should have an opportunity to spend a year or two years in a Dominion university, doing some study but mainly concerned with, through the university, acquiring some knowledge of the way of life of those countries.

I suggest to my own countrymen that in Canada, which today is reputed to be one of the richest countries in the world, they should try to get hold of some tame millionaires, no doubt by the conferment of a few honorary degrees, and get them to endow some fund which will enable young men and women from this country to spend some time in Canadian universities, and also, in the future, in Commonwealth universities generally.

Sir C. P. RAMASWAMI AIYAR (*Annamalai*): If, as I am convinced, we are all agreed that the primary object of this Congress is to

emphasize the informal but nevertheless very real ties that bind together, and should bind in the future, the various countries of the Commonwealth, then we shall be equally agreed on the subject-matter of the resolution which has been proposed to us. I especially agree with the remarks of Professor MacInnes, whom I have the good fortune to know. Academic mobility between universities in the Commonwealth should not be a matter of one-way traffic; it should be as much a matter of visits of students, postgraduate research workers and distinguished scholars and teachers from one country in the Commonwealth to another as of visits from the countries of the Commonwealth to the United Kingdom.

I am fully aware that a certain amount of interchange is already taking place. Who can deny that the presence of Dr Radhakrishnan as Spalding Professor at Oxford has meant much more than the assignment of a particular professor to a university in the United Kingdom; it has contributed towards an understanding and appreciation of the basic problems of Indian life and Indian aspirations. It has made for a great deal of deep ideological comprehension. Much more of that kind of interchange would be to the advantage especially of the Commonwealth countries. Many of the misconceptions and misunderstandings which from time to time emerge in the relations of one Commonwealth country to another can be resolved much more easily by academic mutuality than by the *ex cathedra* utterances of politicians.

I take it, however, that a great deal can be done which is not being done. I have myself, under the auspices of the British Council, been visiting British universities, and I was thus able to follow, and to explain to my country, the notable advances made in the United Kingdom in respect of the extension and new orientation of university education. In the years 1951 and 1952, thanks to the hospitality of certain American universities, it was my privilege to lecture on Indian history and economics and Indian philosophy at some institutions of higher learning in the United States. But it should not be a question of a stray person travelling from here to the United States or of a professor proceeding on a three or six months' visit to India. It is not that which matters. I am pleading here for more than visits of students from India and similarly situated countries to the United Kingdom. They are doing that already in great numbers, as will be seen from the paper which has been placed in our hands;* the countries from which the greatest numbers of students came were India, with 974, and the United States with 728. That, however, is not enough.

* An advance print of Appendix IV ('Students from other countries in United Kingdom Universities and University Colleges') of the *Commonwealth Universities Yearbook, 1954*.

As I have already said, we must implement the idea of two-way traffic. Many professors can, with advantage, be placed in Indian universities, either on a temporary or a permanent basis, and much benefit would accrue in the form of widening of intellectual horizons. Similarly, if the other United Kingdom universities and the universities in other parts of the Commonwealth were to follow the example set by the appointment of Dr Radhakrishnan, I am sure that the problems of the Far and Near East would be better understood and more expeditiously and easily solved than by other means, because the universities are the training grounds of the youth who will be the leaders of tomorrow. It is only by the impact of cultivated minds on growing minds that this comprehension can come. I also believe that along with the importation of machinery and capital there should take place a lively interchange of educationists not only of specialists but of teachers of the humanities and philosophies.

If the Commonwealth idea is to be implemented, we ask in the first place that there should be interchange of students between all the Commonwealth countries, and secondly that not only temporary assignments but long-term contracts should be made and entered into for the purpose of making people in one country realize the ideals and practical programmes and needs of other countries. What must take place is a kind of spiritual osmosis which will accompany this interchange. I have therefore great pleasure in associating myself with this resolution, and I trust that it will be carried without dissent.

Dr M. FARIBAULT (*Montreal*): I represent the University of Montreal, one of the two French-speaking universities in the Commonwealth. The purpose of my intervention is to suggest a modification of the wording of the third resolution submitted by Sir James Mountford. I am wholly in favour of the principle of Commonwealth interchange, but, to be quite frank, I have grave doubts about the advisability of the proposed co-operatively administered fund, and I remain unconvinced by the reasons given in the report for the rejection of the second alternative solution considered by the Committee, complete decentralization. It is undoubtedly true that with decentralization it would be 'difficult for the scheme to be operated in any sense as a unified Commonwealth project'. But if there is anything evident from our previous meetings it is the extraordinary diversity of our outlook and approach on every subject. Any attempt to secure unity of operation in such circumstances, whatever the test, criterion or formula, is bound to be unrealistic, and I venture to say that the Committee itself has

acknowledged the fact in paragraph 23 of its report, where it states that the task of selection should be undertaken in the country of the application. But the only other possible variation appears to be in the amount of the awards, if these are to cover merely travel expenses—and it would not shock me that one man be allowed to go by first class plane and another by tourist class steamer. Reciprocal exchange is said to entail reciprocal negotiations between the several countries involved, and again this appears very sensible to me, the more so in the light of paragraph 12 of the report, where I suggest the Committee has taken the same stand. I may be another unregenerate capitalist, but I like to know what is the *quid pro quo* in all financial matters. Nor am I impressed by the Committee's fear that a local fund would be used for general foreign travel under a pressure which is not identified in the report, and which I presume would have to be internal, but which at the same time would imply that bogus invitations would be forthcoming. Finally, I fail to see how the contributions of the United Kingdom would be lessened under a separate scheme, but this is something about which I am not qualified to speak.

If I may now turn to the actual proposal of a trust fund, I find a precedent against it in paragraph 18 of the report, where one is referred to bilateral agreements between the United Kingdom and foreign universities. To that might be added the example of my own province of Quebec, where similar agreements have existed with the French government for over twenty-five years. Under this latter scheme there are two separate committees, entirely composed of university people, one in each country, to which the names of the prospective scholars are submitted for consideration. One might be surprised at the multitude of reasons which militate, at one time or another, for or against a single person. Some people have been barred to the disappointment of some of us, but we have felt that individual cases of inconvenience were nothing to cry to high heaven about. My point is that governments are greatly interested in such schemes from a cultural and political point of view, as they very properly ought to be, and therefore I would expect very little disposition on their part to delegate their authority.

The Committee admits that its proposal stems from the analogy of the University Grants Committee. However, we have had plain notice from our American friends that such a Committee could not be exported to their country. It was intimated yesterday morning that federal aid to universities in Canada had met with a poor reception from one provincial government. Personally, I have the very strongest objections to any attempt to foist a Federal Grants Committee on Canada, and I know that in saying this I am merely

stating the opinion of my section of the country. To the reasons given by President Dodds I could add others, but this is not the time to discuss that, and I merely mention all this by way of illustration. In the same way as constitutional questions would be paramount in the internal field of any federal state, I would hate to think that the policies of the several constituent countries of the Commonwealth in a matter such as this could be even tentatively tested much less criticized or misconstrued on the occasion of a proposal of ours. The relations within the Commonwealth are also to a certain extent constitutional questions, about which governments are notoriously sensitive, as witness the very definition of the Commonwealth or the prudence of the official communiqués of Imperial Conferences.

I am sorry I have no time to elaborate on some of the main points which I have raised, nor to discuss others that I have in mind but which are of a minor importance. Far from having any objection to the general principle of Commonwealth interchange, which should be encouraged in all possible ways, I only wish to point out some of the rocks on which the project might founder. I do not think that the resolution as it is at present worded gives us the best approach, and therefore, although some may say that I am trying to water the resolution down, I should like to move, if a motion is in order (in which case it will be seconded by my colleague Mr Casaubon), or, if a motion is not in order, then merely to suggest, that the resolution be replaced by the following:

> 'That the universities of each Commonwealth country are recommended to seek suitable opportunities for approaching their government with a request that it provide funds, make grants and adopt other appropriate means to facilitate visits of university teachers and executives, particularly distinguished scholars, of one part of the Commonwealth to another, and a suggestion that one or more advisory committees or councils, composed of university representatives, be set up and act as clearing houses to help with the selection of the beneficiaries and in the distribution of the awards.'

The CHAIRMAN: For the moment I shall take that as a suggestion, and when we come to deal with the resolutions we can consider the question of a formal amendment.

Dr H. R. HULME (*Canterbury University College, New Zealand*): I should like to underline one or two of the points made by Professor Buchanan. First, the importance of giving very full information in the papers which ultimately reach prospective candidates for jobs. I should like to emphasize the importance of information on facilities for research. I say this because before I left England to go to New

Zealand I circulated a questionnaire to a number of New Zealanders and English people to try to find their reaction to going to jobs in New Zealand, and one of the chief things about which they were worried was the possibility of continuing their researches and whether or not they would be cut off from active work. I suggest that it will pay very well to take great care in the preparation of the papers which reach candidates.

Secondly, I shall presume, on behalf of my New Zealand colleagues, to say that we should be very happy to set up a committee to interview prospective candidates for posts in this country or in other Dominions. We are always sorry to lose our good men, but we do realize that when people flow from the Dominions to England it is a great encouragement to those here, because they then realize that they can come back, and that is very important. Many young people feel that if they go to a Dominion they may be stuck there. Many of them like to come and stay, but it is essential that they should realize that there is a reverse flow, and for that reason it will help if, when a post is advertised, you can say that the vacancy has been caused by Professor So-and-So going to the Chair in Liverpool or Manchester.

Thirdly, I should like to emphasize the importance of superannuation schemes being interchangeable. That has been said again and again, but it should be recorded in this open meeting as being something which is most important.

Finally, I should like to take this opportunity to say that while the New Zealand colleges are called 'University Colleges', and I think that that may possibly put some people off, they are in many respects universities. The parent body, the University of New Zealand, is an office, a Vice-Chancellor and a Registrar, but the four teaching colleges have many of the attributes of universities, in that we plan our own courses, we have our own governing bodies, and in many other ways we are universities. I hope, therefore, that people who are considering posts in New Zealand will not be put off by the term 'University College'.

Sir SYDNEY CAINE (*Malaya*): I wish to emphasize one point which has already been made very clearly by Professor Buchanan and referred to just now by Dr Hulme, and that is the desirability of, as it were, a return traffic in appointments from overseas universities to universities in the United Kingdom, and equally to Canada and other parts of the Commonwealth from which we may draw staff. As Dr Hulme said, it is of great importance from the point of view of recruitment to the young, distant and not well-known university institutions that people who go to them should not feel that they are cutting themselves off for ever from the larger centres of university

education. That is perhaps particularly important in the case of the Colonial university institutions, because very few of the people who go to those institutions from the United Kingdom, for instance, would look forward to spending the whole of the rest of their lives in the Colonial countries, as they might if they went to Australia, New Zealand or any of the other large Dominions.

I hope, therefore, that the United Kingdom universities, and the Canadian universities also, will consider very carefully what was said by Professor Buchanan, who observed that it rested very largely with the universities of this country to arrange their procedures so that it is possible for university teachers overseas to apply for and be considered for posts which may be vacant. It is partly a matter of making those posts known, and in that respect it may be that this Association can do more than it is now doing. That might be considered by the officers of the Association. It is primarily, however, a matter of universities in the United Kingdom, and equally in Canada, being prepared so to adjust their own procedures as to make it possible for these overseas people to be considered.

I should like to make one point arising out of the suggestion which has been made for the amendment of the resolution before the Congress. I do not want to enter into a constitutional argument about the desirability or undesirability of centrally administered schemes, but there is one matter of considerable importance in regard to interchange visits, and particularly of Category B visitors. It is that it may be very convenient to all concerned that such visitors should visit more than one Commonwealth country. If the scheme is completely decentralized it will be much more difficult to arrange such joint visits to more than one country. That may not have impressed the mover of the amendment very much, because that consideration may not arise particularly in the case of Canada; but with visitors to Australia it is very convenient for them to visit also New Zealand or to visit us in Malaya or universities in Pakistan, India and Ceylon on their way to Australia.

Professor LILY NEWTON (*Wales*): I should like to draw attention to one practical difficulty which I myself have had to face this year. When an overseas visitor arrives with a family, there is no possibility of making use of either the grammar schools or the secondary modern schools during the short period for which the man is in this country. The result is that there is great difficulty in finding adequate educational facilities for the children, and if it is done at all it can only be at very high cost. I think that it is worth while to draw attention to this difficulty in case it may be possible for the Committee to deal with the matter at a high level.

In this country, entrance into the grammar or secondary modern schools is only by examination; there is no way of admission for a fee-paying student. If it were possible to use the educational facilities during the year while the overseas visitor is in this country, the number of places in the aggregate, from the point of view of the schools, would be very small, but the benefit would be enormous from the point of view of the visitor. I should therefore like to ask the Committee to investigate this problem.

Professor G. W. PATON (*Melbourne*): I think, with respect, that there has been some misunderstanding about this interchange scheme. It is supplementary. In every Dominion we have funds to send our own staff on leave, and we also have more limited funds to bring distinguished visitors from overseas. If an Englishman of his own volition, and not at the invitation of Australia, wishes to come to Australia, he faces very great administrative difficulty in knowing whom he should ask, and an inter-Dominion clearing house such as is provided by this scheme is of the utmost benefit, because it enables people to apply who want to visit Commonwealth universities, apart from those who have been invited to do so. As one of the representatives of Australia, which has benefited very much from this scheme, I should like to say that decentralized local schemes have a most important purpose, and nobody suggests that they should be interfered with. They should be increased in all directions, but, however much such schemes are increased, they cannot quite take the place of this supplementary scheme.

Moreover, as one of the Dominion representatives I feel that for the last five years we have had tremendous benefit from this Commonwealth interchange scheme, the cost of which has been met by the United Kingdom government, and at the Durham conference many of us thought that it was time that the Dominions also made a payment to this supplementary purpose, which is of so much greater value to us in the Dominions than it is to the United Kingdom.

Another point is that under the present scheme we get a great deal of traffic between the United Kingdom and Australia and between the United Kingdom and other Dominions, and in the reverse direction, but we have not had the traffic which we would desire on the periphery, between the various Dominions themselves. That can hardly be arranged on a completely decentralized scheme, though each Dominion can make bilateral arrangements, and that is being done to some extent. An amendment such as has been suggested to Resolution 3 would entirely defeat what we hope to achieve here, because we do need an international clearing house. This is a supplementary scheme which will furnish information and

encourage people to travel. We cannot ask the United Kingdom taxpayer to meet the cost of transplanting Australians to Canada or Canadians to Australia.

The resolution suggests a 'co-operatively administered Commonwealth Interchange Fund'. Those words were carefully chosen to avoid the twin rocks of complete centralization and complete decentralization. Everything that we desire can be achieved under the words of the resolution, and I strongly urge, on behalf of one Dominion which has benefited, that for the dignity of the Dominions and their own welfare we need this co-operatively administered Commonwealth interchange scheme.

General Sir RONALD ADAM (*British Council*): I would reinforce what Dr Ahmad said. As Chairman of the executive body of one of the United Nations agencies, I would emphasize the point which he made that not nearly enough money is being given under the heading of technical assistance to education—rather naturally, because everybody wants to spend the money as quickly as possible, and education is long term.

I believe that under the Colombo plan, provided the members agree, there is nothing to prevent people being sent out to the Colombo plan countries, on educational work.

Finally, I would say how proud the British Council have been to be associated with this scheme, and, with the agreement of the Commonwealth Relations Office, which I am sure that we shall have, we are perfectly prepared to go on in any way and for as long as the Commonwealth universities require our assistance.

Dr K. MELLANBY (*University College, Ibadan*): I come from the University College of Nigeria, and I think that we and the other Colonial colleges are examples of the way in which inter-Commonwealth transfer has occurred. When I spoke to the Congress in 1948 there were ten members on our staff. We now have more than a hundred, and they have come from various countries of the Commonwealth to a very great extent and not only from Britain but, as Professor Buchanan said, from other Dominion countries. The antipodean Dominions have contributed a very great percentage; Canada has not made so big a contribution to transfer as we should have liked.

We feel in these somewhat isolated academic communities how valuable it is to belong to an Association of this kind, so that we can feel that there are academic standards which are maintained by association with a larger body. In these new countries which are going through so much political ferment there is a danger of the

colleges being subjected to interference of a kind which has been so successfully resisted in other countries; and our association with the A.U.B.C. and the help which we have had from such bodies as the Inter-University Council and the University of London does much to maintain our position.

One type of transfer of great value concerns students. I think that we all owe much to the initiative of Dr Veale, who visited us recently, and who has been very largely responsible for a system by which recent graduates engaged in research will come and live with our student body. I hope also that at some stage actual undergraduate movement, which was mentioned by a previous speaker, may be possible. I think that it is theoretically possible in the case of the Universities of Oxford and Cambridge and Trinity College, Dublin, for the students to keep terms during their undergraduate courses in any of the other universities. If some arrangement could be made to allow the Colonial colleges to count for keeping terms for undergraduates from other universities, I think that that would be of value.

Finally, I was very pleased to hear Sir Sydney Caine's remarks regarding the return of Colonial staff to United Kingdom universities after serving for a time overseas. There are few difficulties in the way of very eminent persons, but with others, if a man is unable to remain because, for example, the climate is detrimental to his health, or, as in a case that I have known, his wife is unable to stand the climate, there are very great difficulties. He has got out of the queue. One of the most valuable uses for these travel funds would be to make them available for members of staff who have to be interviewed. If there was a central fund which could be used for that purpose it would be of great benefit.

There does not seem to be any shortage of money for travel. We get an immense number of visitors, most of whom we greatly appreciate, and a number of others who are not so valuable. If some of these funds could be better administered and used for other purposes than at present it would be of added value.

The CHAIRMAN: Before I put the resolution and give Dr Faribault an opportunity to move his amendment, I will give Sir James Mountford the opportunity to make an explanation.

Sir JAMES MOUNTFORD: I have a copy of the amendment in front of me, and it seems to me that the two things which the amendment seeks to achieve are to leave out any reference to a Commonwealth Interchange Fund and to leave out the words 'co-operatively administered'. It suggests instead that there should merely be a series of advisory committees which could act as a clearing

house to help with the selection of beneficiaries and the distribution of awards.

We spent a great deal of time at Durham in considering the form of words which might suit the various conditions which would arise in the future, and the phrase 'co-operatively administered' leaves it open for any kind of arrangement to be made by the governments of the Commonwealth countries at such time as they decide to come into a general scheme. I think that it does not necessarily follow from the words 'co-operatively administered' that all interchanges would be administered centrally or that all the arrangements would be on exactly the same basis. The way is open for much more fluid arrangements than those suggested in the report. Time and experience may show that a variety of administrative patterns will be necessary.

The other objection which I find to the amendment is that although it contains reference to grants for distinguished visitors, it does not contain any reference to grants for travel between the overseas Commonwealth countries themselves.

I must again emphasize that the resolution was intended to leave the situation as fluid as possible, so that the final arrangements could be made at a high-policy level when the time is ripe.

The CHAIRMAN: With the consent of Congress, I will now put the resolutions under Item 3 of the Additional Agenda, 'Commonwealth University Interchange'. There are really four resolutions under this heading. Resolution (1) reads:

> 'That the thanks of the Congress be expressed to the Commonwealth Relations Office and to the British Council for the generous institution of a pilot scheme for Commonwealth University Interchange so soon after the resolution of the Sixth Congress in 1948 which agreed that the various governments and official bodies be asked to provide a fund to assist academic travel within the Commonwealth.'
>
> *The resolution was carried.*

The CHAIRMAN: Resolution (2) reads:

> 'That the Congress considers that the initial scheme has operated as a valuable supplementation of grants and arrangements made in various countries for leave abroad and for inter-university visits, and has been of great benefit to universities in all parts of the Commonwealth; and that the Congress hopes that the provision of funds will be maintained to enable the experiment to be continued through the next five years.'
>
> *The resolution was carried.*

The CHAIRMAN: Resolution (3) reads:

'That the universities of each Commonwealth country are recommended to seek suitable opportunities for approaching their government with a request that it should make a contribution to a co-operatively administered Commonwealth Interchange Fund to enable the present pilot scheme to be continued and expanded, especially in relation to grants in Category B (Distinguished Visitors) and to grants for travel between the overseas Commonwealth countries.'

It is now for Dr Faribault to move his amendment.

Dr M. FARIBAULT (*Montreal*): I shall not speak again on the amendment, except to say that if the word 'co-operative' leaves the situation fluid, the omission of the word 'co-operative' leaves the situation still more fluid. My second point was that I objected to the words 'a fund'. It seems to me that the question of finance is one which had better be left to the several governments. I have in mind the relation between governments and universities at various other levels, and here again the position is made still more fluid by leaving something unsaid.

If careful consideration was given by the Committee to the wording of its resolution you may perhaps feel that I have given it even greater consideration, and that, under the amended wording, it will still be possible to make all kinds of arrangements, co-operative or otherwise, at all and any levels. I therefore move that the resolution be amended to read:

> 'That the universities of each Commonwealth country are recommended to seek suitable opportunities for approaching their government with a request that it provide funds, make grants and adopt other appropriate means to facilitate visits of university teachers and executives, particularly distinguished scholars, of one part of the Commonwealth to another'

—I am quite willing to add 'or others'—

> 'and a suggestion that one or more advisory committees or councils, composed of university representatives, be set up and act as clearing houses to help with the selection of the beneficiaries and in the distribution of the awards.'

Mr L. CASAUBON (*Montreal*) seconded the amendment.

The CHAIRMAN: I put the amendment to the meeting.

The amendment was negatived, three votes being cast in its favour.

The CHAIRMAN: I now put resolution (3) to the meeting.

The resolution was carried nemine contradicente.

The CHAIRMAN: Resolution (4) reads:

'That the Congress hears with pleasure that funds are being made available by the United Kingdom Government to make possible the assistance of interchange visits between universities and university colleges in the Colonies and universities in the other Commonwealth countries and desires to express its earnest hope that such arrangements may receive support also from the governments of the Colonial countries themselves and may be brought closely into the Scheme under the proposed Commonwealth Interchange Fund.'

The resolution was carried.

The CHAIRMAN: We now return to Item 2 of the Additional Agenda, the resolution on Superannuation.

Dr D. W. LOGAN (*London*): I hope that the resolution which I have the honour to move will prove a little less controversial than some of the others which have been before the Congress this morning. It stems from a resolution of this Congress five years ago which is set out in the printed document* with which you have all been provided. Even if there had been time I did not propose to take you through the document, but I can briefly summarize its effects as follows.

The importance of interchangeability of superannuation schemes in promoting academic mobility within the Commonwealth has been emphasized by two speakers this morning, and it will be agreed that it is a factor of real significance. In the surveys of the superannuation provisions which have been made since 1948 and which are referred to in the pamphlet, it is clear that there is such a variety of pension arrangements in the universities of the Commonwealth that a single uniform scheme modelled on the Federated Superannuation System for Universities which operates in this country is out of the question.

We have had a good deal of experience in this country in the past five years of the pension problems which arise in connexion with interchangeability of staff between the Civil Service and the nationalized industries, and the solution has been to make suitable transfer arrangements when a person moves from one form of employment to another; he carries with him his pension rights which have accrued up to the date of his transfer, and, what is more important, where the pension scheme is contributory, he takes with him his employer's contributions to date as well as his own.

* See Appendix III.

This is the matter of principle. If the principle is accepted, putting it into operation will be a long and detailed process. I suggest, however, that the first stage is to put on record our approval of the proposal that there shall be a real interchangeability of pension rights between universities of the Commonwealth, and I therefore beg to move the following resolution:

'In order to facilitate the movement of teaching staff between the universities of the Commonwealth, the Congress recommends that all superannuation authorities should make provision in their schemes so that a university teacher, when appointed to the staff of another university, shall be entitled to take with him the full actuarial value of the benefits which, under the Superannuation Scheme in force in the institution which he is leaving, have accrued to him during his period of service, or to which he could have become entitled in respect of that service.'

The CHAIRMAN: Whatever the Congress is going to think of the resolution, I am sure that it will want to express its very warm thanks to Dr Logan for the pains and work which he has put into this very difficult and important subject, both in respect of the printed memorandum which was sent round to members of the Congress and in respect of his work since the Durham meeting. Is there any discussion?

Mr A. J. T. FORD (*Australian Vice-Chancellors' Committee*): I should like to support strongly what Dr Logan says about the value of interchangeability of superannuation schemes as an aid to academic mobility. There is one small difficulty which arises in the Australian universities. Six of them at present have schemes which are on the F.S.S.U. basis, and each of these six universities provides in its scheme that policies accepted for superannuation purposes by the F.S.S.U. scheme in the United Kingdom will be automatically accepted into the scheme conducted by these universities. The difficulty arises when staff members from Australia under these F.S.S.U. pattern schemes wish to gain admission to pension schemes in the United Kingdom universities on the F.S.S.U. I know that there are some difficulties which militate against the ready acceptance of these people into the F.S.S.U. scheme, but I feel that endeavours should be made to overcome them.

I therefore suggest that this resolution should be amended by the following addition:

'That where the superannuation benefits accruing to a staff member who is moving from one university to another take the

> form of an insurance policy, every endeavour be made to have this policy accepted into the scheme at the new university where such scheme is on the F.S.S.U. pattern.'

I feel that this will overcome some difficulties for Australian universities, and it may apply to others the circumstances of which I do not know.

The CHAIRMAN: In view of the lateness of the hour, perhaps Congress would like to consider the desirability of referring that addition to the Executive. Is there any other discussion? If not, will Congress agree that I shall put the resolution, and then put as a separate motion that Mr Ford's suggested addition be referred to the Executive?

The Congress agreed.

The CHAIRMAN: Then I put the resolution.

The resolution was carried.

The CHAIRMAN: I now put the motion that Mr Ford's addition be referred to the Executive.

The motion was carried.

The CHAIRMAN: I ought to ask Congress formally to agree to the first resolution on the Additional Agenda, which reads:

> 'The Conference received reports of the progress made during the quinquennium in implementing these resolutions in the various countries; it resolved that universities and inter-university bodies should be urged to give more effect to them than has hitherto been possible, and on two of the matters covered by these resolutions it made special recommendations to the Congress as set out in 2 and 3 below.'

The resolution was carried.

EXTRAORDINARY GENERAL MEETING OF THE ASSOCIATION OF UNIVERSITIES OF THE BRITISH COMMONWEALTH

Minutes of a Meeting held at the Senate-House, University of Cambridge, on Wednesday, 15 July 1953

Present:

Sir PHILIP MORRIS, University of Bristol, *Chairman.*
Sir WILLIAM HAMILTON FYFE, *Hon. Treasurer.*
Dr BASHIR AHMAD, University of the Panjab (Pakistan).
Sir C. P. RAMASWAMI AIYAR, University of Annamalai.
Dr T. ALTY, Rhodes University.
Dr S. BHAGAVANTAM, Osmania University.
Professor R. O. BUCHANAN, deputy for Dr. G. A. CURRIE, University of New Zealand.
Mr A. M. CHOWDHURY, deputy for Dr S. HOSSAIN, University of Dacca.
Professor MANSFIELD COOPER, deputy for Sir JOHN STOPFORD, University of Manchester.
Dr T. B. DAVIE, University of Cape Town.
Lt.-Col. K. L. DUBEY, Nagpur University.
Col. The Rev. W. T. R. FLEMINGTON, Mt. Allison University.
Dr J. A. GIBSON, deputy for Dr M. M. MACODRUM, Carleton College.
Lt.-Col. A. B. A. HALEEM, Karachi University.
Dr G. E. HALL, University of Western Ontario.
Mr B. L. HALLWARD, University of Nottingham.
Sir HECTOR HETHERINGTON, University of Glasgow.
Professor T. HYTTEN, University of Tasmania.
Dr F. CYRIL JAMES, McGill University.
Mr D. G. JAMES, University of Southampton.
Sir IVOR JENNINGS, University of Ceylon.
Professor T. G. H. JONES, deputy for Mr J. D. STORY, University of Queensland.
Dr A. E. KERR, Dalhousie University.
Dr V. S. KRISHNA, Andhra University.
Dr J. F. LEDDY, deputy for Dr W. P. THOMPSON, University of Saskatchewan.
Dr D. W. LOGAN, University of London.
Dr N. A. M. MACKENZIE, University of British Columbia.
Dr W. A. MACKINTOSH, Queen's University, Ontario.
Professor J. A. MANCHÉ, The Royal University of Malta.
Professor J. W. MANNING, deputy for Professor R. W. WILCOCKS, University of Stellenbosch.
Professor V. K. MENON, Patna University.
Sir CHARLES MORRIS, University of Leeds.
Sir A. L. MUDALIAR, University of Madras.
Mr J. H. NICHOLSON, University College, Hull.
Professor G. W. PATON, University of Melbourne.
Mr S. L. PRESCOTT, University of Western Australia.
Dr H. R. RAIKES, University of the Witwatersrand.

Col. LINDSAY RIDE, University of Hong Kong.
Mr A. P. ROWE, University of Adelaide.
Mr J. C. ROLLO, deputy for the Vice-Chancellor, University of Rajputana.
Lt.-Col. SYAMNANDAN SAHAYA, Bihar University.
Dr SIDNEY SMITH, University of Toronto.
Sir THOMAS TAYLOR, University College of the South West, Exeter.
Dr T. M. TAYLOR, University of Aberdeen.
Mr M. TIMUR, University of Peshawar.
Dr R. P. TRIPATHI, University of Saugar.
Sir NAVROJI J. WADIA, University of Bombay.
Sir LIONEL WHITBY, University of Cambridge.

Dr J. F. FOSTER, *Secretary*
Mr A. L. FLEET, *Assistant Secretary*
Miss S. WHIBLEY
Miss H. QUARRINGTON

By invitation of the Executive Council of the Association there were present thirty-nine members of staff of member institutions who were also attending the Seventh Quinquennial Congress of Commonwealth Universities.

1. NOTICE OF MEETING

The notice of the meeting which had been circulated by post to representatives of member institutions and their deputies on 17 June, and which was printed in the Congress Programme was taken as read.

2. REPORT OF THE EXECUTIVE COUNCIL FOR THE QUINQUENNIUM 1948–53*

The Report of the Executive Council on the work and activities of the Association since the 1948 Congress was submitted by the Chairman, who referred also to the Annual Reports presented to the Annual General Meetings, the latest of which, that for 1951–2, had also been circulated for information with the Congress papers.

It was unanimously agreed to receive and approve the Report and to thank the Secretary and staff for its preparation.

3. FINANCES OF THE ASSOCIATION

The Chairman referred to the tabular summary of the accounts for the quinquennium printed with the Report and explained that the figures for the financial year 1952–3 which would not terminate until 31 July, were based on the actual income and expenditure for nine months and on estimates for the remaining quarter.

The Hon. Treasurer, Sir William Hamilton Fyfe, presented the

* See Appendix I.

summary of the accounts and explained the statements in his introductory note which was taken as read.

He stated that the financial position of the Association had been under discussion at the recent meeting of heads of member institutions at Durham, which had recommended that the present minimum subscription rates for member institutions be raised by 50 per cent with the understanding that institutions which wished to contribute voluntarily at a higher rate than the minimum (as some do at present) would be at liberty to do so, and that the Executive Council be asked to investigate the possibility of making some provision under which genuine cases of hardship could be dealt with, and be empowered to take appropriate action accordingly.

He then moved that the general subscription rates should be increased by 50 per cent. Professor Hytten (Tasmania) seconded the motion and asked that the Executive Council in the next quinquennium should endeavour to find a more equitable basis for the grades of subscriptions.

General discussion ensued in which Dr Davie (Cape Town), Dr Logan (London), Dr Raikes (Witwatersrand), Dr Smith (Toronto), Dr MacKenzie (British Columbia) and Sir Thomas Taylor (Exeter) took part.

The Chairman thanked members for their views and said that the question of the fixing of the subscription rates, which could only be made at an Extraordinary General Meeting during a Congress, would arise under a later item on the agenda, when he would submit a series of recommendations from the Executive Council. The motion was accordingly deferred.

On the motion of the Hon. Treasurer, seconded by Professor Mansfield Cooper (Manchester), the statements of income and expenditure accounts were received and approved and a vote of thanks was expressed to the Hon. Treasurer, the Secretary and the Accountant for the work entailed in preparing these statements.

4. Subscription Rates

The Chairman, seconded by the Hon. Treasurer, moved:

(*a*) that the minimum subscription rates for member institutions be raised by 50 per cent, on the understanding that institutions which wished to contribute voluntarily at a higher rate than the minimum (as some do at present) would be at liberty to do so;

(*b*) that the Executive Council be asked to investigate the possibility of making some provision under which genuine cases of hardship could be dealt with and be empowered to take appropriate action accordingly;

(*c*) that the Executive Council should be empowered to increase the present scale of charges for the appointments service with the object of making it as far as possible self-supporting.

He said that these proposals had been approved by the meeting last week at Durham of executive heads of member institutions, and were recommended by the Executive Council.

Dr Smith (Toronto), seconded by Dr James (McGill), moved an amendment that the rate for those universities now paying £40 should not be altered, but that institutions in the other grades be asked to make voluntary additional contributions as the home universities had done.

After general discussion Dr Logan, seconded by Mr Hallward (Nottingham), moved that the following words should be added to part (*b*) of the Chairman's motion: 'In exercising these powers the Executive Council shall consult with the inter-university body in the country concerned.' Dr Smith then withdrew his amendment, and Dr Logan's motion was adopted.

The motion as amended was then put to the meeting in separate clauses, all of which were adopted.

5. Alterations to the Memorandum and Articles of Association

It was reported that the Executive Council had had under consideration the revision of the formal constitution of the Association as set out in its Memorandum and Articles, and on the report of a sub-committee consisting of the Chairman, Dr Logan and the Secretary, in consultation with Sir David Hughes Parry, proposed to submit to a further Extraordinary General Meeting on due notice a series of amendments of which the principal objects were:

(*a*) to remove certain inconsistencies and anomalies in the present Articles, e.g. by substituting (in conformity with the recent change of name of the A.U.B.C.) 'Commonwealth' for 'Empire' where it occurs, and by drawing a clear distinction of terminology between 'Members' referring to member institutions and 'members' referring to individuals attending meetings, etc.;

(*b*) to provide for the offices of Chairman, Vice-Chairman and Hon. Treasurer of the Association and to make them members of the Executive Council if appointed from outside its elected membership;

(*c*) to revise the list of institutions entitled to membership as set out in Schedule A;

(*d*) to bring the references to the Companies Acts into conformity with recent legislation.

The list of proposed amendments which had the approval of the executive heads conference, had been circulated.

On the motion of Dr Logan, seconded by Dr Mackintosh (Queen's, Ontario), these amendments were received and approved and the Executive Council was instructed to take the necessary steps to bring them into legal effect. The Chairman stated that it was intended to submit them as a Special Resolution to an Extraordinary General Meeting which would be convened at the same time as the Annual General Meeting in November.*

The Chairman stated that he had no further business to bring forward under Article 36, and closed the meeting.

* A further Extraordinary General Meeting for this purpose was held in London on 26 November 1953, when a Special Resolution incorporating amendments to the Memorandum and Articles of Association was duly passed.

FIRST SESSION ON SPECIAL TOPIC

'WHAT SUBJECT OR SUBJECTS TODAY ARE BEST FITTED TO FULFIL THE ROLE PLAYED PREVIOUSLY IN THE UNIVERSITY CURRICULUM BY THE CLASSICS?'

Chairman: PROFESSOR S. H. ROBERTS
Vice-Chancellor of the University of Sydney and Chairman of the Australian Vice-Chancellors' Committee

Opening Speakers:

PROFESSOR H. N. FIELDHOUSE (*Dean of the Faculty of Arts and Science, McGill University*)

SIR JOHN LENNARD-JONES (*Principal of the University College of North Staffordshire*)

MR D. G. JAMES (*Vice-Chancellor of the University of Southampton*)

DR S. RADHAKRISHNAN (*Chancellor of the University of Delhi, Member of Senate of Andhra University*)

DR R. B. MADGWICK (*Warden of New England University College, Australia*)

SUMMARIES OF ADDRESSES

The following summaries provided by the opening speakers were printed in the Congress programme:

(*a*) DEAN H. N. FIELDHOUSE

(1) On the assumption that, in a symposium of this kind, it will help to provoke discussion if speakers address themselves to particular aspects of the question at issue, I should confine myself to the question of what the classics contributed to 'general' education (cf. Mr Walter James's remark that 'universities should be viewed

primarily as places where people who will one day run the country finish their education') and, therefore, to the question of what discipline might supply what the classics supplied, in this respect.

(2) Given this starting-point, I would suggest that the study of the classics (the philosophy and history of the ancient world as well as its literature) required the student to enter into the assumptions of a society whose experience was different from that of our own. It produced an awareness of 'difference'. This perception of 'difference' which could once be taken for granted (the educated man of the early eighteenth century was very much alive to what Bolingbroke called the different 'manners, customs and interests of particular nations') has, in any case, been largely lost in our own intellectual climate and, whereas we would seem, therefore, to stand in particular need of a reminder of 'difference', the more fashionable subjects of study today (the social sciences) would seem to tend either (as does economics) to minimize differences of time and place and to concentrate on what is either constant or abstract, or (as does sociology) to emphasize general patterns at the expense of the contingent and the particular.

(3) I would suggest, therefore, that we need to be reminded of 'difference', and that, in such places as find it impossible to sustain the classics, we need a modern equivalent of them in the sense of a study of the history, letters and religion of an alien society, i.e. one whose assumptions are removed from those of our own society either in time or in space.

(4) It should be added that this suggestion is addressed to our contemporary situation and is not meant as a prescription for all time: since, in these matters, we move in zigzags and the corrective of today may itself be in need of correction a generation hence.

(*b*) SIR JOHN LENNARD-JONES

The advantages of a classical education have often been stated and are generally accepted, but the claims that are made often apply not to the average graduate turned out by the universities but rather to the mature scholar.

In most universities today the classics are studied by only a small fraction of the students, and many of our graduates leave with a knowledge of only a limited field. There is need to give to the science student some idea of humanistic studies, and to the arts student some knowledge of the spirit of modern science.

In the new University College at Keele in Staffordshire an attempt

has been made to broaden the range of interests of students. Some account will be given of the courses of study and the methods adopted to provide a general, rather than a specialized, education.

(*c*) MR D. G. JAMES

(1) A case might be made out for English, a stronger one for history, or again perhaps a still stronger one for medieval studies. But I think that the answer to the fundamental question (which underlies the question as stated for discussion) is not to be found in terms simply of subject or subjects.

(2) It is obviously important that in the days when classics were predominant in European education, Christianity was a far more powerful thing than it is now. Classical education was part of something wider, which, as a whole, was Christian. Thus, it is not enough to say, What can we substitute for classics? It is parallel to asking what we can substitute for Christianity (which was the ground on which classical education was built).

(3) Thus, I do not think the question as it stands can fairly be answered. Europe grew up as a Christian civilization and the study of the classics was part and parcel of it. The whole has gone, and reviving a part or finding a substitute for a part, even if it were possible, would not really help.

(4) Certainly, we still, in the democratic countries, live in the liberal tradition which has grown out of the old order. If Christianity (and with it, the study of classics or of, say, medieval civilization as the staple of education) is not to return (and there is little enough chance that it will) we must sustain, and work within, the liberal tradition. This means that, as universities, we must say that there is, or should be, *in the liberalizing context of a university*, no subject which cannot be the occasion of and means to a liberal education. Any other answer seems to me to be plainly inadequate; but the implications of *this* answer for universities seem to be very great indeed.

(*d*) DR S. RADHAKRISHNAN

Education should give us not only a body of knowledge but a quality of mind. It must liberate the spirit of man from ignorance and superstition, endow him with a sense of enduring values and a capacity for discriminating judgement. It must produce men and women who are not only technically skilled and professionally competent but are endowed with courage, character and imaginative comprehension. Our universities today should voice the prayer of the wise

king who felt that wisdom did not consist in mathematical knowledge but in an understanding heart. For many of us who live in what has been called the contemporary uproar, what is most needed is a sense of proportion, of perspective. Our young students have to be saved from the dangers of specialism.

Classics, Greek and Latin in Europe and America, Sanskrit and Persian in India, give us a sense of the past heritage, a knowledge of the traditions which have taken centuries to build and standards of thought, judgement and conduct. They release us from the tyranny of the present, of the contemporary mind.

Till the new system of education was introduced in India after the famous minute on education by Macaulay, the aim of education was to impart a sense of reverence for the past and restraint in behaviour through the study of the classics. This education, however, was the privilege of the few and not the possession of the many.

Till recently education was of a highly literary character and suitable employment for the large numbers of those who were fit only for desk work could not be found.

After the transfer of power, it is realized that India needs agriculturists, engineers, scientists and technicians and efforts are being made to change the emphasis.

Other periods of history had their social revolutions, economic dislocations, class conflicts, their periods of what answers to the Renaissance, the Reformation, the political and the industrial revolutions in Europe. All these together are now affecting the peoples of the world. We in India are facing this many-sided challenge. The problem is how to preserve the basic values of our cultural heritage without losing the momentum which science and technology give to human progress.

We should be careful that we do not produce a mass culture in which humanities in the traditional sense of the term languish, in which the arts are smothered by the demands of mass entertainment, freedom is constricted by the deadweight of mass opinion and the life of the spirit wanes. The sickness of our society is due to the fading away of a faith to live by.

There is a revival of interest in classical studies in India but I am afraid that it will be too much to expect that every student in the universities will take to them. Art, literature and philosophy may serve to impart to the young a unified view of life. They lead us along a different path to the same goal as religion, to a union even more intimate with:

'Our only true, deep-buried selves,
Being one with which we are one with the whole world.'

These studies are sacramental in character. They are in the highest sense a way of life, an unconscious religion. They are the means of awakening us to the values of life. We are alive but we will not be really aware if we do not learn from the humanities.

Philosophy in the traditional sense of the term, as love of wisdom, has an element of universality that brings the sciences into unity, cooperation and accord. There is a common though unformulated heritage of philosophical wisdom, whatever may be the system of the teacher. To read Plato or Plotinus, Śankara or Rāmānuja is an experience. Their thoughts lift us above ourselves and give us a sense that life has real contact with something of eternal value. Even those who specialize in applied sciences and technical subjects should have a general course in literature and philosophy. In this University the late J. E. C. McTaggart used to give general lectures in philosophy which were greatly appreciated even by those who did not specialize in philosophical studies. Philosophy in the larger sense saves us from the danger of what Plato called 'encyclopaedic smattering and miscellaneous experiment'.*

Matthew Arnold described Oxford as 'whispering from her towers the last enchantments of the Middle Ages', by which he meant that the cultural traditions of Christendom influenced its life. It was there in the very air we breathed. It sounded in its bells. It haunted its cloisters. The living past was alive in it. Today the whole world has become a close neighbourhood and the classics of the past have become the inheritance of everyone of us. In our universities the classics of Greece, Rome and Palestine, as well as those of China, India and Japan, require to be studied, at least, in translations. They are our priceless possessions and our university studies are incomplete if we are not awakened to the deep integrity of spirit which vitalized and developed the traditions of which the classics are the outcome.

(*e*) DR R. B. MADGWICK

There is no simple answer to this question, for in different universities the role of the classics is different not only because of the different content of the subjects which together comprise the classics, but because of the different emphasis placed on the classics in the curriculum. There are probably as many answers to the question as there are universities.

In Oxford or Cambridge, despite differences in emphasis, the classics not only gives a thorough linguistic training, but also a broad liberal education in the best sense through the emphasis placed, for example, on ancient history and philosophy. The Australian universities, on the other hand, have tended on the whole to regard the

* Laws 819 A.

classics as Greek and Latin; and students submitting themselves to these disciplines study them more narrowly. They read less widely; they are tied more rigidly to set books; they have, at best, a shallower knowledge of history and philosophy and, at worst, they do not include these subjects in their courses at all, except in so far as they get them incidentally through their set books.

There are many reasons for these differences, one of which is important for my present purpose. In Australia a degree in pure classics is a positive bar to entry in industry, commerce or the public service. A little Latin and a little Greek are well enough; but most employers would demand that a graduate, even in the faculty of arts, should have wasted as little time as possible on these useless subjects and that his course should have contained subjects of immediate practical application.

Against this background, and leaving other difficulties on one side for the moment, the answer to our question seems fairly obvious. At its best the classics gave its graduates two things—a linguistic training which helped them to express themselves clearly, exactly and often elegantly, and a cultural training which helped them to think clearly and broadly and which gave them a reasonably adequate appreciation of the bases of Western thought and Western institutions.

I would therefore suggest that the best alternative to the classics would seem to be the detailed study of a foreign language such as French or German, together with an integrated course comprising general literature, history and philosophy as the hard core, and with economics and political theory to illustrate important applications of general principles. I would require either history or philosophy to be studied intensively.

I would stress the importance of these subjects being carefully integrated and not departmentalized. I believe that the weakness of classical teaching throughout Australia has been the failure to develop classical schools; and my present proposal would achieve no more than we have now unless the subjects suggested were taught as part of a school of humanities and not as separate disciplines.

Having agreed on the course of study our major difficulty remains, for we are still faced with the overriding problem of prevailing on students to embark on a course which, from their point of view, is just as vague as the course it is designed to replace, and just as likely, in Australia at least, to be viewed with suspicion by potential employers.

I doubt whether, in the short run, there is any completely satisfactory solution to this problem, although in Australia something could be done by changing the organization and the techniques of teaching. This would involve a ruthless scrapping of departmen-

talized subject teaching and its replacement by schools of study. There are signs already that this is happening—but it is not happening quickly enough, and it is not based on any preconceived philosophy of university education.

We are therefore forced back to the position that in the twentieth century a university is regarded by the community, and therefore by its students, as primarily a source of vocational training. While this remains true, students will continue to choose their courses with an eye to future employment rather than breadth of knowledge or depth of understanding; and our problem therefore becomes not so much a matter of what subjects are taught as of how they are taught. The university may recognize in the subjects it offers that it has a vocational function without allowing its methods and its ultimate purpose to be determined solely by this factor. I suspect that the benefits bestowed by the classics on its students might come equally from any other group of subjects, providing they are taught by men and women of wide culture and providing they are taught broadly, with the object of developing understanding, and not so narrowly as merely to impart a body of knowledge.

Accordingly, having admitted that the classics is declining, and that a possible alternative might be equally unpopular, I come finally to the position where the answer to our question rests in providing some form of general education for all students, and in encouraging our staffs to regain their belief in the vital importance of teaching as the paramount function of a university. In other words, I feel, at least for Australia, that the answer is perhaps to be found, not in any subject or subjects, but in a new approach to teaching based upon a rediscovery of the real purpose of a university.

OPENING ADDRESSES

The CHAIRMAN (Professor S. H. ROBERTS): Our subject tonight is the 'Special Topic', and I should like to place on record our appreciation of the subject which has been chosen. At Durham and here in Cambridge some of the subjects have been a little pedestrian, but the subject which we are to discuss this evening is a basic subject for all universities. It is 'What subject or subjects today'—I should prefer to say 'Which', but our august masters say 'What'—'are best fitted to fulfil the role played previously in the university curriculum by the classics?'

There is a tradition in Cambridge—a very polite tradition—that no one can contradict the Chairman; and I should like to say,

particularly in anticipation of what my colleague from New England is going to say later, that the word 'previously' should, so far as Sydney is concerned, be deleted from the question, because we have a classical tradition going back well over a hundred years; and our complaint, which I ought probably to have voiced this morning, is that you in this country are recruiting overmuch from the Australian universities, or at least from Sydney. We have lost our Professor of Latin and our Professor of Ancient History to Cambridge, and we should have lost our Professor of Greek but for the fact that he is deputizing for me during my absence from Australia.

So far as my university is concerned, we have not only kept pace in regard to the classics with the inflationary increase in numbers of students, but the Faculty of Arts, and in particular the classical departments, have more than kept pace.

I have been told that the length of this meeting depends directly upon the length of the Chairman's remarks, and so I propose now to call on Professor Fieldhouse, of McGill University, to address us. I suggest in all seriousness that his title gives the answer to this discussion, because he is Dean of the Faculty of Arts and Science.

Professor H. N. FIELDHOUSE (*Dean of the Faculty of Arts and Science, McGill University*): It is appropriate, since I am the only member of this panel who is not the head of an institution, that I should take the place which, in the music hall, is given to the least considerable 'turn' and should address the 'house' while it is 'cold'. Fortunately, the Chairman has set us the example of taking liberties with the topic. I say this because I should be sorry if there were any idea that, because I am taking part in this discussion, I am anxious to do away with the classics. I hope to see the classics maintained in all vigour and, as will be clear from the printed summary, the interpretation which I shall put upon this topic is to ask what it is that, in our contemporary situation, I find particularly valuable in the study of the classics and (in places in which substitution may be necessary) what other subjects might yield something of that value.

In this Congress, very naturally, our discussion is limited to curricula in the universities, but I would say, as an aside, that I do not readily see what can replace Latin as a subject of study at certain stages in the schools. So far as the universities are concerned, the aspect of the subject to which I wish to confine myself is that indicated by a remark of Mr Walter James in a thoughtful article in *The Fortnightly* in which he said that 'Universities should be viewed primarily as places where people who will one day run the country finish their education'. I shall, therefore, be talking about training in the university for public life, by which, of course, I do not mean

merely public office, i.e. I am confining myself deliberately to the utilitarian.

In so doing, I should like to make three quick asides to my colleagues, not only in the classics but also in the humanities in general. In Canada, we are altogether too modest about the humanities. I sometimes detect in my colleagues a tendency to talk of them as a kind of decoration; to surrender the market-place to the physical sciences and the council chamber to the social sciences, and to reserve the humanities as a kind of cultural consolation prize. For my part, I think that that surrenders altogether too much.

On other occasions, it seems to me that we go to the other extreme and take on airs of superiority. We say that the humanities may not contribute anything useful but that they are the real source of values. That too, I think, will not do. For one thing, we have no monopoly of values. If the physical sciences are masters of the methods appropriate to their own purposes (as I think they are), then they have their own values. In the second place, while the humanities afford valuable material for making judgements of value, those judgements are not necessarily inherent in them. The humanities can be made (and have been made) the vehicle both for mere sensual enjoyment and for completely amoral intellectual withdrawal.

Thirdly, our conception of the humanities is often, in my opinion, too static. We harp on their importance as embodying tradition. Here, I can be brief. In the university of Erasmus, of Cudworth and of Milton, one may observe that the great periods in the days of the humanities were periods in which they were the instrument of change and not merely of conservation.

Starting then, from this (if I may so call it) more robust conception of what the humanities in general, and the classics in particular, are about, and addressing myself to this question of university training for public life—by which I repeat, I do not mean only public office—we may ask what it was that a liberal education liberated us from; and, in this context, I should say that it was from the limitations of our own position in time and space. Now this is something which it is very necessary, but also very difficult, to do. All of us—individuals and peoples—are imprisoned within our own experience and, unless this natural limitation is corrected by deliberate training, we judge the words and actions of others in the light of that experience. If I give a lecture to sixty students, I am delivering sixty different lectures. One set of words issues from my mouth but each student hears something different, according to the variety of experience, range of enlightenment, amount of previous information etc., which he, or she, brings to the hearing of what I say.

You will, perhaps, allow an historian to take an illustration from

his own subject. It bears upon something which is of special importance to us in the English-speaking world. I think that I could defend the thesis that a unique feature of English history has been the way in which the nation was able to take three great steps, one after another, and with an interval in which each was thoroughly consolidated before the next was taken. The English nation achieved a profound organic unity so early that this unity was thoroughly consolidated before the nation went on to secure ordered liberty under the law, and this liberty, in turn, was secured and digested before its forms had to be readjusted to meet the stresses of modern industrialization. If we would estimate the importance of this sequence, we might consider the opposite case of Germany which arrived on the threshold of the nineteenth century with all three things to be done at the same time. Consider, again, the unique features of the history of the United States. For the first century and a half of its independent existence, it was the beneficiary of a balance of power which left it free to develop a whole continent in safety from foreign attack, and to do so precisely at a period when the technological revolution was supplying the means of development.

My point is that the good fortune of our two peoples has made it difficult for either to enter into the experience of less fortunate nations. There was a time when to say this would have been a platitude; when educated men would have taken for granted what Bolingbroke called the different 'manners, customs and interests of particular nations'; but our generation, and that of our students, has been heir to an intellectual climate still heavily shot through with the inheritance of that rationalism which, starting from the proposition that, if you give all men free institutions, you make them free, tended to move to the proposition that, if you give all men the same institutions, you make them all the same. The sense of difference has been blurred, and we have tended to confuse the proposition that we can all love one another with the proposition that we can all be one another.

Now, in North America, at any rate, this tendency has been strengthened by the very strong, current fashion for the social sciences. I hasten to say that this is not meant as criticism of those sciences as such. I am speaking only of the results of studying these sciences, and very little else, at the undergraduate level; because the laudable desire of the social sciences to press on, in imitation of the physical sciences, to the formulation and the establishment of general laws, seems to make the undergraduate impatient of the particular and the concrete, either in time or in place. I find that such students look for 'the conceptual pattern' of, for example, feudalism or fascism and are impatient of distinctions between different forms of feudalism or of fascism. Yet it made a great deal of difference to actual men and

women (particularly if they were Jewish men and women) whether they lived under fascism of the Italian pattern of 1922 or the German pattern of 1933. I suspect that I am not alone in noticing the abstract character of much contemporary social science. A leading United States economist recently remarked to me that the study of economics in his country had deserted both history and geography and had no location in either time or place; and I notice that the *Oxford University Handbook* remarks that the training for Modern Greats is 'necessarily deficient in historical depth'.

One example of this lack of historical depth will also serve to illustrate my point about 'difference'. I need not remind this audience of the difficulties which we have had, first, with the Germans, and now, with the Russians, about the interpretation of the word 'democracy'. Quite apart from the deliberate misuse of this term as an instrument of national policy, there has been a real difference. Our criterion is qualitative. We use the term 'democracy' to denote the whole nexus of private and public rights—freedom of association, freedom from arbitrary arrest, judgement by due process of law and so on. But there is another, quantitative conception of democracy which uses the term to denote any régime which enjoys mass support, and our ignoring of the difference has had odd consequences.

If you look at the criticisms of our liberalism which were current in the totalitarian countries, you find that they are all criticisms of the rationalist, slightly mechanistic democracy of the continental kind and as equated (*a*) on the political side, to the process of nineteenth-century enfranchisement—the mere throwing open to the many what had been reserved for the few, and (*b*) on the economic side, to liberal capitalism. Taken in this sense, the criticisms were often both cogent and relevant; but the consideration which escaped the totalitarian critics and (what is more important for my purpose to-night) which escaped too many of our social scientists and which I find to be completely unknown to my students in social science, is that the essence of our own liberties is older than either rationalism or democracy; that it goes back, partly, to the development of the medieval common law and partly to the by-products of the religious conflicts of the seventeenth century when sects which had failed to capture the state for their own purposes fell back upon marking out areas within which the state should not be allowed to interfere; so that criticisms of the mechanistic quality of democratic majorities or of the social sins of a particular economic order—however true in themselves—are irrelevant to it.

Lastly, and closely allied to my first point, I take it that the best education would be one which would be closest to reality. Here again I am perturbed—and please let me repeat that I speak solely

of the effect of these studies at the undergraduate level—by the tendency in Canada, and still more, I think, in the United States, of the social sciences to become a kind of secular religion with strongly melioristic overtones. I do not like quotation, but I am going to read you a brief one now, partly to save time and partly because it is taken from a very distinguished son of this university, Professor Michael Oakeshott.

'This project of a science of politics', writes Professor Oakeshott, 'is, indeed, the common ground of all that is most characteristic of modern politics. It is the common ground of both the achievements and the failures of modern politics, because it is the project which determines what is attempted. The belief that politics, at their best, are the science of the arrangement and improvement of human societies in accordance with certain abstract ideals which are taken to be absolute in value and universal in application, the belief that the problems of the organization of a society are scientific problems (that political conflict can be resolved into scientific controversy), the belief that politics are (or should be) 'social engineering'—these have been the main (though not exclusive) inspiration of political activity in Western Europe for the last two hundred years....And, not less surely, they have given us the ideas and ideals which determine our present political enterprises: that economics can and should replace politics, that the ideal of government is the administration of things and not the government of people, that the solution of every social and political problem lies in the discovery of an administrative technique, that all crime is a disease for which a cure can be found, that the risks and uncertainties of both political and commercial bargaining can be replaced by the certainty of rational calculation, that (in short) it is only our ignorance of the universal causes of human activity which stands between us and a society incomparably better ordered, more just and more prosperous than any human society that has yet existed.'

I touched on this matter at Oxford, five years ago, and I must be brief. I know that there have been times and places in which it was necessary to emphasize the possibilities, rather than the limitations, of human knowledge, but I suspect that contemporary North America, at any rate, is not one of them. I think that, in our undergraduate curriculum, we need the corrective of studies which remind us of the contingent and chancy character of human affairs and of the toughness of their texture; which remind us that the tendency of men to take advantage of each other is not to be attached to any particular set of institutions but finds new lodgement with every secular change; which remind us that we have to work with the strongest, as well as with the highest, tendencies of human nature, and that our problems

are only tragic if judged in the light of a perfection which we have no grounds to expect. It is because the humanities, in general, and the classics in particular, supply this corrective, because they deal with the real as against the abstract and with the particular as against the conceptual, that I should like to see them maintained.

The CHAIRMAN: I should explain that we are not taking the speakers in alphabetical order, as their names appear in the Programme, for various reasons of continuity and because some of them are leaving Cambridge tonight. Our next speaker is well able to deal with this problem; he is Sir John Lennard-Jones of the University College of North Staffordshire.

Sir JOHN LENNARD-JONES (*Principal of the University College of North Staffordshire*): In considering what should take the predominant place, which the classics once occupied in university education, we have to ask what advantages could be claimed for that type of discipline and what measure of success was achieved.

In the first place it is generally agreed that the serious study of Latin and Greek calls for powers of concentration and sustained attention and in that respect provides a good mental discipline. The attempt to translate to and from these languages induces the quality of logical thought, and gives a sense of word structure, of elegance of language and clarity of style. The qualities of mind thus produced—viz. powers of analysis, accuracy of thought and expression, the habit of reasoned appreciation of the points of an argument and the ability to reject that which is irrelevant—have been found invaluable to the student in his subsequent career. The highroad of the classics has led many men to the topmost pinnacles of the professions, whether as teachers, lawyers or administrators. In this sense the classics may be said to have imparted a good *vocational* training.

The study of classical literature, however, meant more. It opened the gates to a new world of literature and thought and led to the appreciation of ideas on philosophy, religion and the problems of society. This imparted not only a *cultural* quality but also a *moral* value to classical education, and it is these aspects which over the centuries have given to such studies their important significance and high prestige among educated people.

We must beware lest we assign to all students of the classics these desirable attributes. The average boy at school, or the average student at the university, does not reach these higher flights of attainment. For him it is the linguistic difficulties which always appear paramount. He may thereby acquire a certain quality of discipline and thus reach a certain standard of *vocational* training, but he cannot be said to have

entered the company of the cultured. The qualities often claimed for a classical education are possessed, in fact, only by the mature scholar.

We have now to ask how far other studies have succeeded in producing results similar to the classics. In this inquiry you will expect me as a scientist to consider the advantages and disadvantages of a scientific education. As I have referred to the mature scholar in the one case, so perhaps I may consider for a moment the high-ranking scientist in the other.

It will, I think, be generally conceded that the successful scientist must possess integrity of mind. His thought must be accurate, his approach critical and his language precise. The discoverer of new facts or the author of a new theory has to exercise the greatest care in the choice of language whereby he publishes to the world his results for the first time. He knows that his work will be subject to careful examination and critical study. The pages of the Royal Society journals contain some notable examples of English prose, distinguished alike by clarity of thought as by simplicity and accuracy of style. The study of science leads in the end to some of the *vocational* qualities acquired from the classics.

There are other advantages to be gained which may be wholly lacking in the student of the classics, or indeed of any of the humanities. The study of any brand of experimental science develops the faculty of *observation*. The well-trained experimenter is like the artist. He has a keen and observant eye and quickly comprehends the significance of what he sees. It is so fatally easy for the arts student—or, indeed, for the arts professor—to know all the sonnets written about the skylark but not to recognize one in full-throated song and flight.

The study of science tends to preserve the gift of *curiosity*. It was, I think, R. L. Stevenson who in one of his essays referred to the curiosity of a child or a man of science. Note the correlation in this respect of the child and the man of science. So many men leave their curiosity behind them with their childhood—at any rate their interest in and inquisitiveness about the material world around them.

The great value of a training in science is that it teaches students to *do* things, to use their hands as well as their heads and to learn by experiment. It teaches a form of craftsmanship and produces a sense of achievement and of discovery.

On the other hand, the study of science by itself does not lead to the fields of thought of the classical writers or to the consideration of the moral values of the ancient philosophers. In this direction it falls short. As Lord Greene once said in an address to the Classical Association: 'A race that knew and cared for nothing but science and its practical application would, if left to itself, become as soulless and mechanical as the formulae it invented and the engines it created;

just as a race that knew and cared for nothing but the humanities would end its life in dreams or in some cloister of the mind.'

The education of the really first-class scientist does not as a rule present a problem. Usually good scientists are men of natural curiosity about all forms of knowledge. They possess the qualities of interest, concentration and power of application and have withal retentive memories so that they acquire a fund of information on a wide variety of topics. Many scientists and thinkers of the front rank have been produced by this University of Cambridge, though their formal studies might be described as highly specialized. A man can emerge as a Wrangler from the Mathematical Tripos without compulsorily reading any other subject whatever. Yet the top products of this form of study reach the highest level in scientific thought and endeavour. The reason is that by being clever they also have leisure and, having also inquiring minds, they educate themselves in the wider sense.

I once heard a discussion in Cambridge over a glass of port as to whether Rutherford was an educated man. The talk was illuminating as an indication of the limited appreciation that university dons sometimes have of the scope of education. Rutherford was not an educated man in the limited conventional sense, but usually he had something lively and refreshing to say on almost any topic of conversation.

The real problem in our universities—at any rate for the scientists—is how to deal with the not-so-good. They aspire to the glittering prizes awaiting the successful scientist, and give an undue amount of their time to their particular studies. With great labour and industry they reach the lower grades of the first class, or the top grades of the second class, but they do so at the cost of a limited outlook and highly specialized knowledge. They fail to relate their particular subject to the wider fields of inquiry. As scientists they tend to become followers rather than leaders and, unless they develop other qualities, they tend in their subsequent careers to become high-grade technicians with limited objectives. In a scientific age it may be necessary to have an adequate supply of men with such limited attainments. The question is whether by a different university training they could become better and happier citizens, and be able to take a more active and critical part in the affairs of the community which they serve. Many such would profit more by a general education than by the specialized courses which most universities now provide.

The main weakness of most university studies today is that the courses are designed by specialists for specialists. The heads of scientific departments have their eyes set on the production of first-class men for their postgraduate schools. The reputation of a department today depends more on its scientific output than on any other

factor. It brings financial support, honours for the staff, and a queue of students for training. For this reason universities in choosing their professors stress the importance of research to the exclusion of almost all other qualifications. It is necessary only to glance down the list of university appointments—at any rate in the science departments —to realize that the prizes go to the young and promising research workers, limited and specialized though they be. This practice tends to accentuate the degree of specialization in science departments. It is doubtful whether this over-emphasis on research on the part of university staffs produces the best form of education for the majority of the students passing through our courses. If we seek to make radical changes in the form of university education now provided, it will be necessary to start at the top and imbue some at least of our professors with a new outlook.

Because of the specialist tendencies of most modern universities, an attempt has been made in the new University College at Keele in Staffordshire to provide a more general type of training. The college does not at the outset cater for the specialist. The course is intended to give students some appreciation of the interconnexion of the main branches of knowledge rather than an intense understanding of any one. There is no desire to prevent or discourage the students from becoming specialists later on, but no provision is made for this in the undergraduate years. The idea is that the student will probably be all the better as a specialist if, with a good background of the main branches of study, he turns his attention to a particular field in his postgraduate work.

An attempt has been made to broaden the range of undergraduate studies in three directions. In the first place all students, whatever their ultimate aim, must devote themselves to the discipline of the same general course of study in the first year. Because this course is regarded as the basis for all subsequent work it is referred to as the Foundation Year.

Secondly, no student is allowed in the three years of the degree course which follows the Foundation Year to specialize in only one subject. He must take at least two to the same level. These are described as his Principal Subjects and they are studied throughout the second, third and fourth years.

Thirdly, students must take other subjects to a subsidiary level. The choice of these is limited by the regulation that one subject at least must be taken from each of the three main groups, described as the Humanities, Social Studies and the Sciences, into which the available subjects are divided.

It may be that the course has been made too general by these three requirements, imposed simultaneously, and experience may lead to

modifications, but there is general agreement at present that the course provides a healthy reaction from the highly specialized courses of many universities. It is believed that there is need in our higher educational systems for at least one seat of learning where the emphasis is on a general rather than a specialized training. The college is not intended to be in competition with other universities, but rather to be complementary to them.

The most unusual feature of the course is the form of study devised for the first year. There are three main themes. One of them may be described as Man and his Environment. It is good for the non-scientist, and maybe also for the specialized scientist, to realize the modest place that man occupies in the universe about him. The strange immensity of the dimensions of space and time, which astronomy forces us to accept, produces on the mind a sense of awe and a spirit of inquiry as to the purpose for which man lives his localized existence for so limited a span.

Then below man there is a microcosmos teeming with interest and excitement. Everyone should know something about it if only to realize that the complex forces and mysterious principles which govern that world are operative also in matter in bulk and probably determine, though in ways yet unknown, the activities of living organisms and probably of man as well.

Such a discussion involves an account in general terms of what physics and chemistry and biology are about without necessarily calling these subjects by name. The object should be to give some indication of the physical sciences, of our knowledge of the earth, of living organisms and their evolution, of man and his geographical environment, leading to a consideration of the relation of man to society. It is no doubt an ambitious programme to attempt so vast a theme in a single term in about 100 lectures, but, properly prepared and suitably delivered, such lectures should serve to stimulate the imagination and encourage further study.

With this background of contemporary knowledge, albeit in sketchy and abbreviated form, the next obvious theme is to show how the body of present knowledge has accumulated. In a further term's lectures the legacies of the ancient world are surveyed, not only in science but also in literature, art and philosophic thought. This is followed by a brief history of the Middle Ages in England and the limited literary achievements which have been handed down to us. Thus the way is prepared for the exciting period of the Renaissance and the Reformation with the wealth of literature which it produced. The student is introduced to the age of discovery and adventure not only in a geographical sense but also in the fields of science and philosophy.

Finally, in the third term there is a discussion of the contributions of science to modern society and the effect thus produced on industrial development. This leads to a study of the economic changes which have been brought about, and an account of the political and social institutions of today. In this way the student is brought face to face with some of our modern problems, and is given some idea of the developments which have produced them.

It is, however, not sufficient to require only attendance at lectures. This is a passive experience which can make little impact on the mind. In order to give some depth to this course and to stimulate some active participation of the student in his studies, he is required to attend tutorials to the extent of three hours per week. This is a more personal form of instruction, and small groups of students meet members of staff to discuss in a more informal but more detailed way subjects related to the general course. The idea is to give depth at some points to the subject of study. But a serious attempt is made to introduce the student to branches of knowledge which he has not followed at school. The arts student is obliged to take a tutorial in science, and the science student a tutorial in one of the humanities.

There is a feature of the course which is of particular interest. All heads of departments participate in it, and regard it as one of their important tasks. The design of the course has called for much close consultation between the various professors, and the attempt to produce an integrated set of lectures has provoked much thought as to the proper basis of university education. Even if the course fails in its effect on the students, it will at least have helped to educate the staff.

There is a further feature which is worthy of note. It provides a break in studies at a critical point in a student's career. After concentrating on the requirements of leaving examinations at school, he is free to pause for a while to look round and take stock. He is introduced to new lines of inquiry and to novel points of view. The course prevents the automatic continuance at the university of the subjects studied to a specialist degree at school. Those who have been forced to leave their studies for a time by war-time activities know the challenge and the stimulus of having to resume their former work. Enriched by the experience of other duties they often come back to their original occupations with renewed zest.

There are certain problems posed by such a general course. One is how best to get a large body of students actively to participate in the experiment and to learn by their own contributions to it. However arranged, it is vital that students be encouraged to read and think and argue for themselves.

Another problem is how best to impart some knowledge of science to the arts student. This is more difficult than the preparation of a

lecture on history, or other similar subject, for the science student. Considerable thought has yet to be devoted to the task of conveying to the student of the humanities some idea of the aims, methods and achievements of the scientist.

Whatever the difficulties of providing such a general course of study, all will no doubt concede that the experiment is worth while, and it will have succeeded if it produces alert and critical citizens able to recognize and to meet the problems of the modern world.

The CHAIRMAN: I am particularly interested in what Sir John Lennard-Jones said about the 'foundation year'. In my own University of Sydney we had an opportunity to try such a course of lectures, because of the incidence of compulsory military training. We had a course of lectures on 'The World in which We Live'. Unfortunately, in a university of 9000 full-time students and about 1600 members of staff the problem of numbers became overwhelming, and I should like to ask Sir John how he would cope with that problem, of numbers running into thousands, in his foundation year. Before I put that question to him specifically, however, I propose to call on Mr D. G. James, of Southampton, whose hospitality so many of you have recently enjoyed. I myself would have done so but for the fact that my car broke down in the middle of the French Alps.

Mr D. G. JAMES (*Vice-Chancellor of the University of Southampton*): The topic which we are discussing, so far as our meeting may be said to take the form of a discussion, is what subject or subjects are best fitted to play the role previously played by classics. But the fact is that classics have in their time played many parts and not, as the question implies, only one. One of these roles was set out in a celebrated sermon in which, as I am informed, a certain Dean of the Anglican Church declared that the advantages of a classical education are twofold: first, that it enables its possessor to look down with contempt on those who have not shared its advantages, and secondly, it fits us for places of emolument not only in this world but in that which is to come. But William Hazlitt, a profane fellow if ever there was one, declared that anyone who has passed through the regular gradations of a classical education and is not made a fool by it may consider himself as having had a very narrow escape.

How many are now enjoying classical scholarships, exhibitions and emoluments in the next world I do not know, nor do I know how many classical fools have been let loose on this world; but I suspect that the number of the first is small and of the second not inconsiderable. These two roles, the making of temporal and eternal emoluments and the making of fools, we may no doubt put on one

side, and I know that the classics have had, and have, nobler and better roles than these; but in our time these nobler roles have been expounded, and indeed have been played, with such distinction by Sir Richard Livingstone and Sir Maurice Bowra, that it would not do for me to try, even if I could, to emulate them and their performances.

In the second place, if we have regard to the nobler roles played by the classics, it is clear that they have been played on a stage the scenery of which has constantly changed from generation to generation, and that the classical actor has proceeded with corresponding changes of emphasis, gesture and deportment. In the High Renaissance days he easily dominated the stage; when his name was, say, Vittorino da Feltre he was dead centre; philosophy and history, garbed in suitable classical attires, were permitted to posture round him, and even natural science was allowed to stand about in an absent-minded sort of way.

In those days, however, the educational stage and the actors in their respective roles were insufficiently dramatic. Conflict, we have been told by innumerable scholars, is the essence of drama; but in those High Renaissance days there was no conflict. The role of the classics, in so easy a predominance, was well suited to tableau or masque; but it was not truly dramatic. This was bound to change. There was bound to be a good deal of scene-shifting by that archstagehand, Father Time, and in the seventeenth century a great classical performer, and a Cambridge performer at that, by name Milton, having gone to Italy and there talked with Galileo, came back to welcome and even to urge on to the educational stage a new and scientific actor.

From now on the stage and the roles became dramatic enough. A contemporary of Milton, one Hobbes, made a villainous appearance clothed in suitable black and tried to assassinate classics and put in their place geometry. This was highly dramatic, but the attempt failed and classics survived. In the eighteenth century Dr Johnson played the ancient classical role to perfection, but, though he did not hear it, the clamour of many conspiratorial voices was rising about him, and, as time passed, an increasing number of sombre and truculent figures, with varying pretensions to being scientific, appeared on the stage, and there was now a danger of the drama developing into a confused knock-about.

In the nineteenth century the leading classical actor was an elegant, monocled and disdainful figure who frankly described the audience before whom he played as barbarians, philistines and populace; he preached culture, by which he meant predominantly classics, and regarded science as not quite wholesome. Compared

with Johnson, however, Arnold was a wistful and pathetic player and looked as if he were playing a losing stage-game. Johnson, had he but known it, was also playing a losing stage-game, but he never looked as though he were. Arnold did.

In the meantime, Oxford was contriving a great rearguard action, and laid on what was to prove, so far as classics were concerned, its last whispered enchantment; the figure of Greats appeared on the stage and stood firmly by that of classics. Unfortunately, it also brought in to the aid of classics three lucid English empiricists plus a monumentally obscure German, the immortal trio of Locke, Berkeley and Hume, and the author of the Transcendental Philosophy; they proved dangerous allies; and no one in Cambridge, nor even now in Oxford—that home of causes which have been won elsewhere—will deny that all of them, but especially Hume, were to occupy treacherous and disintegrating roles. You could hardly have Hume *and* Plato. But this was not foreseen by an Oxford which was lost in Hegelian mists.

But by the middle of the twentieth century, the stage was again greatly changed, and correspondingly the roles of the actors. There appeared on the scene, headed by the Vice-Chancellor of Bristol, the Organizing Committee of the 1953 Congress of the Universities of the Commonwealth. They announced that classics, having sickened over a long period of years, was now, unhappily, deceased. This announcement was greeted with surprise and sorrow: surprise, because nobody seemed to have noticed the death which was now announced; and sorrow, because by this time nobody felt any great ill will towards the deceased; he was harmless enough.

The Committee also announced that the intellectual throne mid-stage should be promptly occupied, and that claimants should come from all parts of the world of learning to stake their claim. They came with striking alacrity; and in the scenic setting of a splendid simulacrum of the Senate-House at Cambridge they gathered together in a full muster. But a surprising state of affairs occurred: it was obvious that none of them wanted to press his claim very far; it was even more obvious that no one was willing to support the claims of anybody else.

The stage was then, being now an Elizabethan stage once more, happily visited by a Ghost; the Ghost of Classics appeared, assuming for positively its first and last appearance, and by a fine and moving irony, the vigorous figure and splendid tones of the Warden of Wadham. But the Warden of Wadham, with surprisingly ghost-like mildness, only remarked that, really, if anybody wanted to learn Latin and Greek there was no reason why he should be prevented from doing so.

This wistful observation from beyond the grave added, and very naturally, to the prevailing melancholy. Everyone declared that the centre of the stage and its throne were vacant and must, alas! remain so. Anything approaching drama was now at an end, and everyone wandered about the stage absorbed in his own highly specialized thoughts and took no notice of anyone else. The play's public, which now consisted not at all of Matthew Arnold's barbarians, philistines, and populace but of members of highly educated democracies, judged that all this might be very highbrow but that it was not at all exciting drama; there were plenty of actors, but none of them seemed to have any recognizable role; it was all *Hamlet*, they said, without the Prince. The audience was frankly bored and could not care less. The house emptied, but each actor was so absorbed in himself that he was not aware of it. Box office receipts became negligible, and it seemed inevitable that the show would be closed down. But happily, benevolent governments liberally subsidized this unique and incredibly learned form of university drama, and there was every prospect that it would continue until the cows come home.

The CHAIRMAN: Without in any way associating myself with those last sentiments, I now turn to Dr S. Radhakrishnan and ask him to speak to us. It gives me particular pleasure to call upon him.

Dr S. RADHAKRISHNAN (*Chancellor of the University of Delhi, Member of Senate of Andhra University*): I thank you for this opportunity to say a few words on the topic which has been selected, namely, what subject or subjects today are best fitted to fulfil the role played previously by classical studies, if the latter have to be replaced in the university curricula. Before doing so, I should like to thank the authorities of Cambridge University for their kindness and hospitality to our delegates, and to me in particular.

In the early years of the last century, Sir Alexander Johnston, of Madras, writing to the Chairman of the Board of Directors of the East India Company in London, explained the indigenous system of education which prevailed in Madras.* He said that the education of the child was regarded as a sacred duty, and he was placed under the schoolmaster of his village as soon as he had attained his fifth year. The ceremony of introducing him for the first time to the schoolmaster and his scholars was publicly recorded and was attended with all the solemnity of a religious observance. It concluded with a prayer to the Supreme to aid the children in their endeavours to learn and to become wise. This last sentence states the twofold object of education—'to learn and to become wise', knowledge and wisdom.

* See *Oriental Annual, 1836.*

The aim of education is not only to give us a body of knowledge but also to impart a quality of mind. We must become not merely learned but become wise. Universities must produce men who are not only technically skilled and professionally competent but men who are endowed with courage, character and imaginative comprehension. If we are to keep our souls alive, we must cultivate the graces of heart and mind. Education should satisfy the instinct of curiosity; it should satisfy the cravings of the human individual for justice, beauty, truth, and honour. Both these things are necessary: to supply the child with a body of knowledge, and to help him to cultivate the graces of mind and heart. Both are essential.

It is not fair to assume that only the classics give us the latter, and not the sciences. The greatest discoveries of science are made by men who are of a devout and dedicated spirit. Scientific studies develop in us habits of careful observation, logical analysis and accurate expression. They induce in us a certain disinterestedness of mind. Science teaches the supremacy of the human mind over the material environment. Confidence in law is another chief contribution of science.

Of late, however, scientific studies have become highly specialized. More attention is being paid to applied sciences and technology. Those who are exclusively devoted to these pursuits have a tendency to exaggerate the importance of their specialisms and neglect other disciplines. The breath-taking advances with all their possibilities of good and evil remind us of the urgent need for disciplines which educate the whole man. Scientific advances by themselves are never at fault; they can do no wrong. The source of error lies deep within ourselves, in the selfishness which seeks one's own good at the expense of others. It is all a question of character and imaginative sympathy. There is a Sanskrit saying that to the large-hearted all men are brothers in blood; perhaps the late Professor A. N. Whitehead's remark that 'though the general importance of Truth for the promotion of Beauty is overwhelming, Beauty is a wider and a more fundamental notion than Truth'* has some point. Indian thinkers, along with Plato and Plotinus, see truth and beauty as two aspects of divine perfection. Classics which aim at beauty and truth help to give us proper ideas of integrity and honour, of loving kindness and of unselfish behaviour.

In Europe classics mean Greek and Latin and in India they include Sanskrit and Pali, Arabic and Persian. Masterpieces of literature in these languages give us a sense of perspective and proportion and release us from the tyranny of the present. A Chinese thinker was asked what he thought about the influence of the French Revolution on human history. He answered, 'Do you not think that

* *Adventures of Ideas*, p. 341.

it is too soon to form any judgement on that question?' Apparently he wishes us to develop the perspective of the stars.

Till recently education in India was of a highly literary character, and in schools and colleges Indian classics were neglected. European orientalists in the last 150 years opened the eyes of Indians educated on modern lines to the value and significance of ancient classics. Today it is felt that the country needs more engineers, agriculturists, scientists and technicians, and efforts are being made to change the emphasis. The problem is how to preserve the basic values of our cultural heritage without losing the momentums which science and technology give to human progress.

Though there is a revival of interest in classical studies in India, it is too much to expect that every student in the universities will take to them. Yet we owe to our young men and women an authoritative interpretation of their duties and rights, of their aims and purposes. Art, literature and philosophy may serve to impart to them a unified view of life. Along different paths they lead to the same goal as religion, to a union ever more intimate with

> 'Our only true, deep-buried selves,
> Being one with which we are one with the whole world.'

These studies are sacramental in character. They are, in the highest sense, a way of life, an unconscious religion. They awaken us to the values of life. When I speak of philosophy, I do not mean the modern fashion which reduces it to a study of language and logical analysis. I mean philosophy in the larger traditional sense of the term as the love of wisdom, philosophy which has an element of universality about it. To read Plato or Plotinus, Śankara or Rāmānuja is an experience. Their thoughts lift us above ourselves and give us a sense that life has real contact with something of enduring value. Even those who specialize in applied sciences and technical subjects profit from a general course in literature and philosophy. In this University the late J. E. C. McTaggart used to give a general course in philosophy, which was appreciated even by those who did not specialize in philosophical studies. I was pleased to hear yesterday your distinguished Chancellor of the Exchequer quote Lytton Strachey that Cambridge is the 'home of poetry and common sense'. I would say 'of poetry and *therefore* common sense'. In the famous Massachusetts Institute of Technology and in other similar institutions in the United States I am informed that humanities, or liberal arts as they are called there, are taught to students of technology throughout their careers.

It is the function of great art to reveal how things that appear chaotic and fragmentary in our daily life seem to be parts of a perfect whole in another aspect.

Through literature and philosophy we establish links with the past. We feel through them, not only the pastness of the past but its living presentness. The most prominent feature of the modern age is the growing unity of mankind. When the ultimate assumptions of different cultures are drawing together in close intimacy, it is essential for us to study not only our own tradition but other traditions also. 'Who knows England who only England knows?' A few minutes ago Dean Fieldhouse of McGill University said that traditions should be studied not only as means of conservation but as instruments of change. Traditions grow and ripen by getting into contact with one another. When they are studied in isolation they lead us into narrow-mindedness, textual fundamentalism and spiritual death. In our universities, the classics of Greece, Rome and Palestine, as well as those of China, India and Japan, require to be studied at least in translations. They are our priceless possessions, and our education is incomplete if we are not awakened to the deep integrity of spirit which vitalized and developed the traditions of which the classics are the outcome.

This world, if it is to sustain itself on a fundamental basis, cannot do so merely on the political and economic level; it cannot do so on the level of food, agriculture and health. It can be brought together only on the plane of mind and spirit, and, if it is to be realized on that plane, an acquaintance with other systems of thought and culture must be regarded as the indispensable equipment for any cultivated man in the twentieth century. The challenge of the modern world requires us to develop a maturity of mind adequate to the conditions of today, and we cannot develop that maturity of mind unless we are able to have some acquaintance at least with the basic values which have sustained other traditions and contributed to their growth and vitality.

From the British Commonwealth we have men of different races, cultures and languages, and there have been brought together here certain representatives of the famous American universities also. If these meetings are to result in something enduring, what is essential is cultural understanding.

People often speak of our generation as a lost one. My own impression is that it is not a lost generation, but it is a sorrowing generation. It is unhappy that in the rush and roar of daily life it has no time for recollection. It is concerned that its modes of thought are greatly influenced by what is known as practical success and material welfare. Deep down it has an intimate realization that it has lost something vital. 'They have taken away the Lord...and we know not where they have laid Him'. Our society is sick and sorrowing because it is hungry for vital knowledge, for the spiritual orientation.

If we give our youth strength and confidence in the ultimate decency of things through classics or philosophy and literature, they will yet redeem the world.

The CHAIRMAN: Dr Radhakrishnan spoke of what has been called 'the missing generation', but I am sure that I express your point of view when I say that so long as we can have such an inspiring address from a man who is at once an Indian intellectual figure and one of India's great political figures there can be no talk of any lost or missing generation. Owing to his many duties, Dr Radhakrishnan has to leave tomorrow, but I count this Congress extremely fortunate in having him to speak to us tonight in such an illuminating and inspiring fashion.

My next task is a singularly pleasant one, because I have to introduce Dr R. B. Madgwick, the Warden of New England University College. That, if I may say so, is a misleading title. Within the next few months he is to become the first Vice-Chancellor of the University of New England. It is in that capacity that I introduce to you Dr Madgwick, the Vice-Chancellor-elect.

Dr R. B. MADGWICK (*Warden of New England University College, Australia*): A summary of my views is before you. I do not propose to follow it strictly, but merely to do two things: first, to say something about the answer which I have suggested to the question put to me, and secondly, to state some of my own prejudices about university education.

My assumptions and my approach to the question are, I hope, clear enough from the summary, and I shall say no more about them. I suggest, however, that the question which has been put to us has two aspects. In the first place, we are asked what can replace classics within the broad framework of the humanities, from which it is tending to disappear; and secondly, what can we do to broaden the training and outlook of graduates in the pure and applied sciences and in the many branches of technology. The question here is whether we want to return some way towards the position where the impact of the universities on the community will be made, as it was made in the past, not by specialists but by men and women of broad culture and deep understanding.

On the first of these two points my summary is, I hope, reasonably adequate, and I shall content myself with saying something about the subjects I have suggested as an alternative. I shall however emphasize, by implication at any rate, how essential it is that these subjects should be integrated into a school of study, because I admit that, studied separately, they would not be subjects at all, at least in the sense in which a modern academic understands the word.

With regard to the subjects then. My philosophy would deal with the development of modern thought and not with semantics and pure logic for its own sake, and I would pause long enough at the appropriate periods to take in something of the history of science, which in part at least is the history of philosophy. My history would not be based on period studies but would try to paint a picture in bold colours of the whole sweep of human achievement which has resulted in what is sometimes called western civilization. My general literature would aim at introducing my students to the really first-rate minds of the last few thousand years—and there have not been so many of them as to make the task impossible. In politics I would not describe political institutions or the principles and practice of public administration, but rather try to lead my students through the broad fields of political ideas and political ideologies. In economics I would, at least for my present purpose, eschew as something really evil the so-called refinements of pseudo-mathematical analysis, and aim at a broad and sympathetic understanding of the factors affecting the well-being of individuals and of nations. Only in the teaching of a language as such, whether English or Latin or French or German, would I depart from this broad approach and demand precision and exactness.

On the whole, I think I should turn out graduates with all the faults that many of my own academic staff would deplore. Except in language, they would be detailed experts in nothing, but, I would hope, full of enthusiasm for broad scholarship, tolerant, sympathetic, responsible, not ashamed of generalizations, idealists in the best sense. The other schools would still train the historians as such, the economists, the psychologists and the linguists; but my people, I hope, would be reasonably adequate substitutes for the classicists whose high qualities I personally admire, and whose disappearance—and in some places they are disappearing—I deplore.

Having agreed on the course of study, our difficulties are far from behind us, because we are still faced with the overriding problem of prevailing on students to embark on such a course of study, which for their purpose and from their point of view is just as vague as the course it is designed to replace, and just as likely, at least in Australia, to be viewed with suspicion by potential employers; because our employers are still misguided enough to believe that all university students at graduation should possess a degree of expertness in some field which will allow them to fit readily and, from the employer's point of view, profitably into some enterprise.

However, there are, I believe, solutions to this problem, although I recognize that they must vary from university to university. In Australia the solution is to be found in a change in the organization

and in the techniques of teaching. It involves primarily a ruthless scrapping of departmentalized subject teaching and its replacement by schools of study. There are signs in Australia already that this might happen, but it is not, I think, happening fast enough, and I do not believe that it is based on any preconceived philosophy of university education. I am myself convinced that while the practice persists in faculties of arts of allowing students to choose subjects of study without any proper integration of their courses we shall continue to turn out far too many graduates who possess a dangerous appearance of expert knowledge in some field but who lack either depth of understanding or breadth of vision.

I should like to say a word, before going on to discuss some of my own prejudices, about the second group which I mentioned at the beginning of this address, those who work in applied science or technology and whose contact with the humanities is accidental, or at least incidental to their main purpose. If I proceed along this line I shall open up the whole problem of general education, and this is not the place for such a discussion, even if I had the knowledge and the time to open it effectively. But it is apparent that, as the number of applied scientists and technologists increases, and as they become a considerable proportion of our graduates, so the influence previously exerted on the community by the university through its classicists and generally through its graduates in the humanities will become progressively weaker and more and more overlaid by the view that expertness in a narrow field is in fact education. I do not believe we can allow this to happen; and, just as I would demand of my arts students that they should know something of the history and philosophy of science, so I would demand of the others that they should subject themselves somewhere in their course to non-scientific and non-technical disciplines. At least they should be compelled or induced to read some general literature and some history and some philosophy. In Australia they are at present not allowed sufficient time to do so, even when lip service is paid to the idea that they should.

The general run of graduates in science and technology are as ignorant of cultural and humane studies as the general run of arts graduates are about the discoveries of modern science. The fact that the survival of western civilization as we know it may very well depend on broad understanding rather than specialist knowledge leaves the arts man just as unmoved as apparently it leaves many of the scientists. The former says that he does not understand the social implications of what is happening, because he does not really understand what is happening, and the latter says that it is none of his business anyway. The universities may well be left condemned out

of hand for evading the issue, if and when at some time or other the community demands a lead from them.

All that I can do here is to state my own opinion, that at least in Australia something must be done along these lines, although probably it can be done only by adding another year to the university curriculum in all faculties, unless careful pruning can save the time. In some faculties, such as medicine and engineering, it has always seemed to me that slightly lower technical proficiency might be more than outweighed by a broader vision and a wider sympathy for humanity in general, or by some knowledge and understanding of economic, social and political phenomena. Certainly in the basic faculties of arts and science it seems to me to be impossible to do what I want in three years.

Having said all this, I still feel that the answer has eluded me, and it is here that I should like to speak for a few minutes in blacks and whites, forgetting the refinements and modifications which perhaps I should introduce. I want to suggest to you, in the terms of the last sentence of my summary, that our question perhaps resolves itself into something like this: can we achieve the results the classics achieved not by teaching any particular subject or group of subjects but by re-examining our attitude towards the universities themselves? Here, I think, we come hard up against two fairly modern phenomena which, it seems to me, deny in themselves the true purpose of a university. The first of these I have hinted at already, namely, departmentalized teaching, or what I might call the exalting of the subject, and the second is research, or what I might call the exalting of the process. Together, these two produce the neglect of the human material given us to teach, namely, the students.

Let me hasten to add in my own defence that I am not trying to deny the importance of the subject as such, or of research as such. The importance of both is admitted. What I do deplore is the elevation of the subject until it produces narrow specialization, and the elevation of research until it acquires a capital R and becomes almost the sole avenue of appointment to university staff or of promotion to even moderately senior status within a university. I believe—and this is one of my prejudices—that we must get back to the old-fashioned idea that teaching is vital. If this is accepted the actual subjects we offer do not seem to me to matter very much. Any subject taught by inspired teachers will turn out the sort of people that we want—tolerant, sympathetic, intellectually venturesome and courageous, prepared to lead and willing and eager to lead. Given those conditions, it does not seem to me to matter whether the subject taught is Greek or nuclear physics, philosophy or veterinary pathology. But while everything in the universities is geared to research or to narrow specializa-

tion in particular subjects, all the changes we make in the curriculum will be largely ineffective.

I think of some of the great men in my own university in my undergraduate days, a geologist, a Shakespearean scholar, an anatomist, an historian and a classicist, all men whose contributions to knowledge and whose publications were of outstanding merit, but whose time was given freely and in large measure even to the least of their students. And their students were inspired by them with a love of the subjects they professed, and were moulded by them into men and women capable of making, and eager to make, a positive contribution to the society in which they lived and worked.

I would therefore suggest that if we want to turn out the sort of people the classics at its best turned out we must retrace our steps a little, not towards restrictive entrance requirements or different courses of study but to those great days when the university teacher was a highly respected, almost a revered figure, loved by his students for the inspiration of his teaching and for the depth of his sympathy, and not, as I suggest is too often the case now, a person regarded by many of his colleagues as a useful hack worker, good enough to teach students because his slender research papers are, if anything, rather more slender than theirs; and destined to remain among the junior staff because he failed to realize that physical phenomena and physical processes were more important than the human material to which, mistakenly, he felt impelled to profess his subject.

In case you think that I am exaggerating too much to make my point, I can assure you that there are universities—and their number is increasing—who appoint members of staff merely on their research record, and who promote merely on research record, and who indeed restrict their higher sub-professorial grades entirely to research workers. I think it would be fair to say that in some universities—how many I do not know—the research worker who dabbles in teaching has his future assured, but the brilliant and inspired teacher who gives little time to research can hope for nothing except, perhaps, the respect and gratitude of his students.

To conclude, therefore, I am sincerely convinced that the twentieth century university must, if it is to fulfil its purpose, carefully examine the whole question of the emphasis placed on its two functions of teaching and research. I hope that I am not alone in believing that the emphasis on research is such that teaching tends to be relegated to a position of relative, and sometimes even of absolute, inferiority. I suspect that the tributes we pay in retrospect to the great classical tradition are very properly paid not because of anything inherent in classics itself but because the great days of classical scholarship were also in fact the days when great teachers inspired their students

with a respect for beauty, a love of truth, and a determination to seek the first-rate, because only the first-rate was good enough. In trying to find a substitute for the classics we may, therefore, be avoiding the real issue. What we may need to do is to recapture the enthusiasm and the inspiration with which in its greatest days the classics was taught.

DISCUSSION

The CHAIRMAN: The other speakers whose names appear in the Programme will give their addresses tomorrow afternoon [see p. 191]. The discussion is now open.

Mr L. P. WILKINSON (*Cambridge*): First of all, I feel that I should declare my interest: I am a lecturer in classics in this University. However, I hope the fact that I believe in the value of my subject will not be held to discredit what I say.

It seems to me that the answer to this question must be different according to which part of the world you come from. The Asiatic countries have their own classics, about which I am not competent to speak but on which they must obviously lay great value. The European countries must surely value the classics, because they are the foundation of European civilization. For the other parts of the Commonwealth they are obviously also the foundation, but in a manner less immediately apparent.

What I wish to suggest is that in the European countries, and particularly in this country, the classics have declined through the fault of the Victorian teachers who laid too much emphasis on the linguistic side, and that the time has not gone by when we cannot revive them with profit for the modern world. Either Latin or Greek up to a certain point is still necessary for entry to the Universities of Oxford and Cambridge, and in this University there has been no absolute fall in the numbers of men reading classics since the 1914 war; and when it comes to the countries in the other parts of the Commonwealth it seems that, in spite of their distance from Europe, they can produce first-rate classicists who have just as much interest in the subject as people born in Europe. Two years ago, among my own College pupils, the best, who got high first classes throughout, came from the Gold Coast, and last year the best came from New Zealand and another first class from Pretoria.

For the majority of people in these Commonwealth countries, however, a less stringent course may be desirable, and, if so, I suggest that the Latin language is what should be encouraged, with the

Greek in translation, because Latin is chiefly remarkable for the language and the Greeks for what they have to say. A great deal has been done recently in the way of popularization, in particular by such things as the Penguin translations, and the fact that the Penguin translation of the *Odyssey* has sold half a million copies suggests that there is an interest in the subject.

Finally, I should like to add one thing about scientists. There have been two recent experiments, highly successful, in this University. There are the courses laid on in the Cavendish Laboratory, with time specially provided, consisting of lectures given by experts from other faculties on ancient civilizations, and there are the courses on English literature during the long vacation. Both have been very well attended by scientific students.

Professor R. N. ARMFELT (*Leeds*): I hope it will not be impertinent if I begin by saying what I mean by the classics. I mean by them the study of the life, politics, philosophy, drama and literature of ancient Greece and ancient Rome. If I am right in understanding the term in that way, and if that is what is intended by the use of the term in the question which we are discussing, I think that perhaps, in theory at any rate, few of us are qualified to speak on this subject. I make an exception of all the speakers who have gone before me, and probably of those who will follow me; but for myself I feel that I am not among the chosen few. I have read some Latin authors in the original and some Greek ones in translation, but in my opinion that does not give me a knowledge of the classics, and, if I am not a classic, how can I talk about suitable replacements for the classics? How can I try to find a substitute for them if I lack true appreciation of what I am trying to find a substitute for? On the other hand, if I were a classic I am confident that I should not have the will to find a substitute; I should say that there was no substitute. Probably that is the answer, but in spite of that I feel emboldened to make a few remarks.

I do so in the first place because the topic is educational, and that is my subject. Secondly, I have had the advantage of listening to my colleagues who have taken a deep interest in this subject and have often discussed it. I suppose that there are two big questions involved, and the first is whether it is desirable to find an exact equivalent to the classics, and then we must know whether it is practicable. On the question of whether it is desirable, I think that it is true to say that historically the classical curriculum as we know it in this country had to some extent a class basis. It was the education of a governing class. The class structure has shifted, and I think that to reproduce the classical curriculum precisely as it was before, or to find an exact

equivalent, would be undesirable. I think also that it would be impracticable, because I believe that classical education was based on certain assumptions with regard to the pupils; they were assumed to have certain cultural assets which today many of them lack.

However, to say that there is not the same function to be fulfilled today as was once fulfilled by a classical education is not to say that there is not a comparable one. We have heard some of the advantages of a classical education, that it has inculcated a notion of accuracy through the linguistic training, and provided an admirable unity of subjects, a corpus, and that the classics were a vehicle of the humanities, and linked, I think, with Christianity. These are valuable services and we cannot ignore them.

The question arises—it is a very deep and important question, and we cannot ignore it—of what we are to do about it. I think that in general the argument seems to revolve round two possibilities: that we should teach single subjects more liberally, so as to make them in effect multiple, or that we should bring two or three or more subjects together in groups. Either might provide a solution, but not, I suggest, until we have done some basic thinking about the purpose of it all. One purpose might involve one group of subjects and another purpose another. In any case, as has been pointed out, the subjects are probably not so important as the way in which they are handled, especially having regard to the cultural bases of the students, on which we have to build.

I do not know what the solution may be. My colleagues carried me a certain distance, but not to the end, and I have been unable to carry myself there. I suggest, however, that we tend to suppose that we can find formulae without facing the difficulties. How important in our thinking, for instance, is religion, and what kind of society do we seek to support? My plea is really for a consideration of purposes rather than a search for panaceas.

Sir LAWRENCE BRAGG (*Cambridge*): The course of arts lectures in the Cavendish Laboratory has been mentioned by Mr Wilkinson, and I should like to refer very briefly to one or two points bearing on the present discussion which we have learned from our experience with these lectures. These are short courses on history, literature, art and music held in the Cavendish Laboratory by our colleagues in the arts faculties. Attendance is voluntary, but the lecture-room is always well filled.

We are in fact trying to supply a vitamin which we feel is lacking from a purely scientific education, and as in the case of a diet deficiency a relatively small amount will correct the balance if it is rich in the missing constituent. From the response of the students

I think one can test what it is they lack. They have welcomed most warmly the lectures on literature, especially poetry, and on cultures of the ancient world. I do not think the mental discipline of a linguistic study of the classics would supply any vitamin they did not get in their scientific studies. On the other hand, if by classics we mean the study of the way men thought, their values, their ideas of the good life, then indeed the study of these cultures is a most wholesome addition to their scientific courses, and is enthusiastically welcomed by our students.

The CHAIRMAN declared the session closed.

A Second Session on the Special Topic was held on Thursday, 16 July (*see p. 191*)

Thursday, 16 July

HIGHER TECHNOLOGICAL EDUCATION

'WHAT SUBJECT OR SUBJECTS TODAY ARE BEST FITTED TO FULFIL THE ROLE PLAYED PREVIOUSLY IN THE UNIVERSITY CURRICULUM BY THE CLASSICS?' (II)

SESSION ON HIGHER TECHNOLOGICAL EDUCATION

Chairman: DR H. R. RAIKES
Vice-Chancellor and Principal of the University of the Witwatersrand, Johannesburg

Opening Speakers:

PROFESSOR J. F. BAKER (*Professor of Mechanical Sciences, University of Cambridge*)

DR K. VENKATARAMAN (*Director, Department of Chemical Technology, University of Bombay*)

PROFESSOR J. P. BAXTER (*Director, New South Wales University of Technology*)

SIR RODERIC HILL (*Rector, Imperial College of Science and Technology, University of London*)

SUMMARIES OF ADDRESSES

The following summaries provided by the opening speakers were printed in the Congress programme:

(*a*) DR J. F. BAKER

1. The place of technology in a university.
2. Undergraduate courses: (*a*) duration, (*b*) content.
3. Postgraduate activities: (*a*) research, (*b*) courses of instruction.
4. Qualifications of teaching staff.
5. Contacts with industry by (*a*) research, (*b*) consulting work.
6. Integrated activities.

(*b*) DR K. VENKATARAMAN

The Government of India in 1945 appointed a committee to consider the development of higher technical institutions in view of the post-war plans of government and industry. The committee recommended the establishment of four 'Higher Technological Institutions' at or near Calcutta, Bombay, Cawnpore and Madras, and the Eastern Institute of Technology was established in 1950. The All-

India Council for Technical Education, constituted in 1946, recognized the advantages of upgrading and enlarging existing institutions, and on its recommendation large capital and recurring grants were made to fourteen departments or colleges of technology. Notwithstanding these desirable developments, technological institutions in India, particularly those concerned with chemical engineering and technology, are faced with several problems. There is a shortage of highly qualified and experienced teachers. Standards vary somewhat widely from institution to institution. The chemical industries have not expanded in accordance with anticipation; the output of chemical engineers and technologists by the universities is in excess of the demand, resulting in unemployment. The Ministry of Education has instituted a number of paid apprenticeships in industry, but many more are required and industry must be persuaded in its own interests to undertake this responsibility and also to support research in the universities. The numerous postgraduate and postdoctoral fellowships maintained by industry in the United States have played an important part in American advances in science and technology. Measures are suggested for enlisting the active co-operation of industry with university departments of technology. Attention is drawn to certain defects in the present schemes of teaching chemical engineering and technology.

(*c*) PROFESSOR J. P. BAXTER

The paper consists of an account of the development and present state of progress of the N.S.W. University of Technology in Australia.

This university, the first university of technology in the British Commonwealth, was founded in 1949, and since that time has made rapid progress. It is today conducting degree courses in a wide range of subjects in science and engineering and is developing substantial research schools in several of its faculties.

The university has boldly faced such problems as the integration of practical experience with academic training, the teaching of humanities in technological faculties and problems of part-time training.

An account of these developments and of the progress made so far will be presented.

(*d*) SIR RODERIC HILL

1. Mankind is disconcerted by the rate of expansion of scientific knowledge during the last 350 years. Science and its applications are not themselves intrinsically indigestible. They have been 'good food' eaten too fast. Many people regard the intensive pursuit of science as a major break with the humane tradition. To what extent

is such a view justified? Adequate appreciation of the general background is desirable.

2. Can we escape the unregulated impact of applied science with its attractions of economic salvation? From the university point of view, is the price we must pay for this new partnership with familiar academic disciplines too high for mental composure? Of what value is the tendency to try and cushion the impact by attenuating specialization? Questions of major importance are the virtues and defects of specialization at schools and in universities.

3. Science surely exists for man, not man for science and its applications. To what extent is the integrity of culture inherited by the West capable of survival in an epoch of such bewildering change? How much can be reaped from the reciprocal reactions of established tradition and scientifically promoted innovation?

4. The educational problem. Moderation of the 'success' motive. Science the prodigal son. The importance of example of all subscribing to the humane tradition, embracing those following the arts and sciences in the form of knowledge and creative work, to less mature communities even more uncertain of their direction.

5. T. H. Huxley's definition of a liberal education. Not repugnant to a rigorous academic discipline in a chosen field, nor to the growth of a sense of fulfilment and a capacity to serve over a widening field of endeavour.

OPENING ADDRESSES

The CHAIRMAN (Dr H. R. RAIKES): Before calling on Professor Baker to open the discussion, I want on behalf of the Association to thank him and all those who helped him to show the Commonwealth representatives his Engineering Laboratory, and for all the trouble they took to open the building to us on Monday last. It is a matter of great regret to many of us that so poor an attendance was possible at that time. I am afraid that many of the visitors had not by then settled down to Cambridge, and some may have thought that the garden party at King's would be more attractive than an Engineering Laboratory. On behalf of the Congress, however, I want to thank Professor Baker very much indeed for the great deal of trouble which he took in arranging for his laboratory to be on view. (*Applause.*)

Professor J. F. BAKER (*Professor of Mechanical Sciences, University of Cambridge*): I should like to thank the Chairman for his very kind

words, which will be much appreciated by my colleagues. It is a great pleasure to show our new buildings to anyone interested.

There has been so much discussion in this country in the past seven or eight years on technological education and the place of technology in the universities that I am almost ashamed to introduce the subject, even at this Congress. Much of our discussion in the past has been confused because we have not defined our aims. Definitions are a bore, but it may save some misunderstanding in this session if I begin by saying what I mean by the various terms.

In the first place, when I say 'technology' I shall usually be thinking of one branch, engineering, not only because it is my responsibility in Cambridge but because it is the oldest form and the one with the longest history in the universities. It is well to remember that many of our civic universities are built on the foundations of engineering institutes. The most important term to define, however, is 'technologist'—a name, by the way, which we engineers still find difficult to stomach. Industry demands technical men of different kinds, and incidentally calls them all 'engineers', from semi-skilled craftsmen to the designers of our jet aircraft. We can confine our attention this morning to the two top classes, technicians and technologists. My definition of a technician is that he is the man who deals with today's problems, a master of all accepted techniques and processes, while the technologist is the man who will deal with tomorrow's problems and who can improve old methods and invent new ones.

Time changes our aims. In the past in this country many universities have attempted to turn out engineers well trained to deal with accepted methods, men who could be immediately useful, what I would define as technicians. This responsible work is now carried out, in the main, by our technical colleges. The universities should have the task of producing technologists. Many of our discussions in the immediate past have been made sterile by the squeamishness which has prevented us in this age of equality, making it plain that the burden was to be divided in this way.

Having decided that its purpose is to educate, or to play as big a part as it can in educating, the technologist, no university which is prepared to harbour pure science—or, as it might be called, isolated science—need have further anxiety about opening its doors to engineering, the most humane of scientific studies. The details of the courses offered may not be the same in every institution or every country, but our aim can be seen if we look a little more closely at this man, this technologist, in whom we are now interested, who is so badly needed in the world today. He must have a sound grounding in a wide field of fundamental sciences and be a considerable

mathematician, who has undergone the discipline of dealing with particular problems in detail. However, he must know when his passion for exact results has to be curbed in the interests of practicability. He will also need a sufficient knowledge of techniques and processes to make possible collaboration with the technician. In addition, he should be a man of character, since the fact must be faced that in improving old processes and methods he will not in industry always have things his own way. Finally, he must be potentially an administrator, and in fact an educated man.

Alarming though this list is, it contains much that we boast that a university is best fitted to give—not all, of course, and here we differ from the aims of the continental schools; but close study since the war has convinced me that our traditional method of collaborating with industry, with the outside world, in educating the engineer cannot be bettered. We are apt to talk of educating the whole man, but no educational establishment can hope to do that. All that we can do is to choose those parts of his education which we are best fitted to deal with in three years' residence.

It would, I believe, be to the advantage of every branch of learning, including pure science and the humanities, if every man, no matter how brilliant he may be academically, were forced to go out into the world for a few years immediately after his undergraduate studies. For the engineer, this is essential. How could we expect a young man to face the rigours and difficulties of an engineer's life if he spent too long in the delightful atmosphere of the university?

In the three years he is with us, what can we do for him? We can give him a grounding in the fundamental sciences and mathematics; we can subject him to the discipline of dealing with particular problems in detail; and we can in our different ways—I should hate to try to state exactly how Cambridge does it—help him to form his character and become an educated man, just as is done for every other student here. I am satisfied that a proper engineering course deals less with the amassing of facts or with techniques than do most of those in the sciences or humanities. The Mechanical Sciences Tripos, our undergraduate course, is recognized in this University as a most rigorous intellectual discipline.

We need not consider the details of the syllabuses, but I believe it best to provide a grounding in the whole range of engineering science. We must all specialize sooner or later, but so interdependent have the older divisions of engineering become that three years' general study is not too much for the man who has to tackle tomorrow's problems. I am not afraid of specialization in the right hands and at the right time; it has great educational value, enabling a man to learn how to pass from analysis to synthesis and how to study in depth. We have

a course here which allows a few selected men to be subjected to a small amount of specialization in their three years, but the great majority of our honours students go out into the world with only their general course.

Let us leave the young man for a moment as he goes out to gather a knowledge of techniques and processes, to learn about men and to discover how difficult it is to apply science, all things which no university or other educational establishment, however elaborate its equipment, can teach effectively. As our aim in the University is to supply an intellectual discipline, not to cram the man with the latest thing for its own sake, in the mistaken ambition of seeing that our students are well equipped, and as we supply this discipline by way of the fundamentals of physical science and mathematics, it might be thought that technological courses could be avoided and the teaching left to physicists and mathematicians. This, however, would be disastrous. The content of our course may not differ radically from the courses in pure science, but there is a radical difference in the approach and in the attitude of the teacher. This approach is much more difficult than anything which faces the teacher of pure science, and the failure to realize the difficulties, or even to see that there is a difference, has been the cause of much misunderstanding. Engineering has a philosophy of its own, and engineering students must therefore be taught by engineers. The more fundamental the teaching, the greater the need for the engineer's aim, to create, to be kept always before the students.

One of the ever-present anxieties for the teacher is how to retain the attitude of mind and obtain the experience which will keep him an engineer. It can be done in a variety of ways. The most obvious is to engage in applied research, which necessitates contact with those in industry who will apply the results. In doing this one is also carrying out a duty to the university, as a place of research as well as of teaching. To discuss engineering research would need a complete session of its own. In technology, unlike the pure sciences, research is not the pinnacle of achievement, but it has a place, and, as those of you who visited the engineering department on Monday may know, we recognize that by accepting research students who return to us after industrial experience. They must engage in real engineering research, not only the study of natural phenomena but of those which man has complicated, and go on where possible to the much more difficult intellectual task of creating something useful. To supervise these research students adequately, the teaching staff themselves must be engaged in original research.

Another excellent way for a teacher to remain an engineer is to engage in consulting work. Relatively little of this is done in

engineering departments in this country, but where it is of the right standing, where it necessitates team-work with industry and gives rise to new research problems and general developments, it is one of the most effective activities and one which I think every university should encourage.

It must be remembered that there are few other organizations in this country employing so many carefully selected men of such high scientific standing as our larger departments of technology. With our freedom to choose our own problems and our close contact with other university departments, it is not surprising that we make real contributions to the advancement of engineering science. We publish the results, and in the past anything from twenty to fifty years has elapsed before they become accepted practice. Engineers must be conservative; working as they do with human lives and large sums of money, they can rarely afford to make an experiment which may be a failure. We can reduce and are reducing this time-lag.

This is the moment to turn again to our young engineer, whom we thrust out into the world with only a knowledge of fundamentals. He has now had some five years in industry, learning techniques and the difficulty of applying science. He will have concentrated by now on some relatively narrow field and be anxious to master it completely. This is the time for him to turn to whatever institution is the authority in his particular specialty and to receive an intensive and advanced course of instruction.

We have in our engineering department here one such nine-month course of postgraduate instruction in structures and materials. It has been running for two years, and is a most thrilling activity. We are dealing with mature men who know the difficulties and who know what they want and go hard after it. Specialization does not hurt them; they are ready for it, and in this nine months they grow in stature, obtaining more from their return to this atmosphere than their new technical knowledge, invaluable though that is. They also contribute much to the department in keeping it in touch with the engineering world.

You will see that I have sketched a completely integrated university activity. Our main interest and responsibility is to the undergraduate. We confine his attention to fundamentals, but presented essentially by engineers, with their own philosophy. The teacher, to remain a lively engineer under these conditions, must engage in the search for new knowledge. When he has found it, he becomes a master in his particular field and is enabled with the greatest efficiency and speed to pass his knowledge on to mature postgraduate students for immediate use.

The weakness of the scheme, you may think, is our collaboration

with industry. Firms must learn to take the young man without specialized knowledge and continue his education and training. They must later be prepared to invest the necessary time and money in him when he returns for a postgraduate course. The first is no problem; for fifty years firms have been absorbing these products from us with avidity. The second, the return of the postgraduate student, is new to British industry, but British industry is learning slowly. Any other scheme of education which may be evolved must in its turn depend on industry to some extent, because our product has to be of this world, the full conditions of which cannot be reproduced in the university. But think of the advantages, and the real economy. We shall be able in the university to concentrate in the undergraduate years on what the young man can absorb, without filling him full of the latest developments which enthusiastic colleagues are always pressing on the course. We can do this knowing that if a man becomes a specialist, and when he will be in a position to profit by specialized instruction, he will be able to go to that institution which is the leading authority in his field. It must also be remembered that only a relatively small percentage of men are likely to return, and this, of course, is an economy. If industry will not accept this small measure of postgraduate instruction, the immense pressure of engineering development will lead to a demand for lengthened courses for all undergraduates, where at great expense immature minds will be forced into moulds which in the end turn out more technicians than technologists.

Dr K. VENKATARAMAN (*Director, Department of Chemical Technology, University of Bombay*): It is clear from Professor Baker's address that the subject before this meeting is not easy to define, but I have taken it to be technology in the universities, and I thought that it would be simplest for me to speak mainly on some aspects of chemical technology with special reference, inevitably, to Indian universities. I might suggest at the outset the desirability of dropping the word 'Higher' from the title 'Higher Technological Education', since this raises the issue of the relative status of university degrees in technology and the diplomas or certificates awarded by technical colleges. Industry, as Professor Baker mentioned, has need for varying types of technologists and technicians. The university graduate has a better background of fundamental science and brings to his tasks in industry a certain outlook, but no stigma of an inferior status should be attached to other types of training. This needs to be emphasized, because there is a tendency on the part of institutions which were started with the specific object of providing industry with technicians, and for giving training of an essentially practical

character, to seek affiliation to universities. It has apparently been noticed also in Great Britain that some technical colleges are inclined to devote a substantial part of their energies to training students for the external degrees of London University.

Recent progress in technological education in India began with the appointment of a Government Committee in 1945 to consider the development of technical institutions in the light of the post-war plans of government and industry and the great increase which was expected in the demand for engineers and other technologists. The Committee reported that the existing facilities for technological education were inadequate both in quantity and quality, and their main recommendation was that a 'higher' technological institute should be established in each of the northern, southern, eastern and western zones of India, priority being given to the eastern institute to be established near Calcutta, followed by the western institute in Bombay.

In 1946 the All-India Council for Technical Education was created. This Council has so far fulfilled at least two useful purposes. It has brought to the central and state governments a sense of urgency with regard to the development of technological education as an essential factor in the implementation of the vast public works projects undertaken by the government and of the schemes for the expansion of industries. Secondly, the Council recognized the advantages of enlarging and up-grading existing institutions, and on its recommendation the Government of India made large capital and recurring grants to fourteen selected engineering colleges and university departments of technology. These institutions were thus enabled to improve scales of pay, appoint additional staff, construct and equip new laboratories, and increase the number of students. In view of the size of the country and with the object in particular of enlisting the support of the state governments, the All-India Council has now created Regional Councils, two of which in Calcutta and Bombay have begun to function.

The Eastern Institute of Technology, near Calcutta, was established in 1950. Courses in mechanical, electrical, civil and agricultural engineering, architecture and naval architecture are being offered, and special postgraduate courses and special research facilities are being provided. The total number of students in the Institute is now 700, and will rise to 3000 during the next few years.

Notwithstanding all these desirable developments, technical institutions in India are faced with several problems. When I was asked to be one of the opening speakers at this meeting I agreed with considerable diffidence, since I belong to an institution which is limited to chemical technology, and I am largely ignorant of the situation in the numerous engineering colleges. I should therefore

prefer to limit my remarks to chemical technology. It seems to me that there are too many departments of chemical technology, while pure chemistry does not receive adequate support. We are probably turning out more graduates in chemical engineering and in the specialized branches of chemical technology than British universities, although the United Kingdom has a very much larger chemical industry. The standard naturally varies somewhat widely from institution to institution. The first few graduates of the first-grade institutions are very good indeed, being comparable with those of British and the best American universities. So far as I am aware, most of our graduates who have gone abroad for postgraduate work have given a good account of themselves. The average, however, is not as good as it should be. There is a shortage of senior teachers with the necessary experience and record of research in chemical engineering and technology, which cover a wide variety of subjects, including the basic sciences of mathematics, physics and physical chemistry. No doubt this difficulty will resolve itself in course of time, since young chemists and chemical engineers with excellent academic qualifications are available. There is no short cut to the solution of such problems, and the obvious thing for us to do is to build our own university departments patiently and steadily.

While there has been a great increase in the numbers admitted to university courses in technology, the expansion in our chemical industries has been relatively small, and the consequence has been some unemployment or employment in unsuitable positions. War industries in other countries of the Commonwealth were developed with an eye to consolidation at the end of the war, and the progress made during the war was maintained and utilized for the development of peace-time industries; but this unfortunately did not happen in India and, owing to various factors which are not relevant to the present discussion, the chemical industries have not advanced in accordance with our requirements, our natural resources, and the anticipations on the basis of which the Scientific Man-Power Committee of the Government of India arrived at certain figures for our needs of technical personnel. I am not suggesting that admissions to technological courses should be limited to the precise demands of government, industry and other employers at a given time, for this would be too narrow a view of the scope and purposes of technological education; but there is no point in training for unemployment by admitting numbers in excess of possible absorption. I believe that in Great Britain and the United States the demand for chemists and chemical engineers is much greater than the supply, and university graduates are in the happy position of choosing their employers after careful consideration.

Following British practice in institutions such as the Manchester College of Technology, my own department in Bombay and others have given courses in branches of chemical technology such as plastics, paints and varnishes, and dyes. This has proved unsatisfactory from the point of view of employment, as well as the rational modern concept of chemical engineering as based on unit processes and unit operations. Technical colleges should provide courses of training in specific manufactures, but university courses in technology should have a broad basis of fundamental science. So far as chemical technology is concerned, the basis should be a sound, carefully balanced four-year course in chemical engineering. After taking this degree a one-year course of study, not research, in specialized branches of technology should lead to a master's degree, the Ph.D. being obtained by research as at present.

An important contribution made by the Ministry of Education in the Government of India to assist the absorption of technological graduates in industry is the institution of a number of paid apprenticeships. It is desirable that this should cover at least 10 per cent of the graduates passing out annually, and the Western Regional Council is attempting to persuade industrial managements to pay for as many apprentices as possible.

There is one other aspect of factory training to which I wish to refer. Whether the training is for a few weeks as part of the requirements for a degree, or for a year or two of paid apprenticeship, it is essential that the programme of work should be drafted jointly by the technical staff of the factory and the staff of the university department. Continual supervision of the work should also be a joint responsibility, and for this purpose each department of technology should maintain the necessary staff to enable such assignments to be made without prejudice to teaching and research. Factory staff are apt to look askance at university teachers, and if full co-operation between university and industry in works' practical schemes is to be achieved it will be desirable to give academic status to a few members of the factory staff, if they have the requisite qualifications, and invite them to participate in programmes of teaching and research.

University teachers must be encouraged to work as consultants for industry. The terms on which they undertake such work may be open to discussion, though there are established procedures in Europe and America. In the United States in particular co-operation between universities and industry is intimate. Considerable discretion is allowed to university teachers in deciding the nature and volume of consultative work undertaken by them, and the university authorities recognize that teaching and research in technological subjects can be pointless and unreal if the teacher is out of touch with industrial practice.

One reason for American progress in science and technology is the large number of postgraduate and postdoctoral fellowships maintained in the universities by industrial corporations. These are available not only for sponsored schemes of research, but also for fundamental work on problems chosen by the university teachers. The I.C.I. and other fellowships in Great Britain fulfil a similar purpose. Indian industry, with a few exceptions, has moved slowly in this matter, but is beginning to support research in the universities and to realize the advantages of a reservoir of scientists and technologists on whom it can draw if the need arises and who will be valuable, not so much for the control of routine processes, as for the investigational and developmental work which is so much a part of the complex chemical industry.

Professor J. P. BAXTER (*Director, New South Wales University of Technology*): I feel that the most valuable contribution that I can make to this discussion on technological training in the university sphere will be to give some account of the work which we have been doing in the New South Wales University of Technology, with some comments on our experiences and a general indication of where we expect our experiment to lead us.

New South Wales is a highly industrialized state with well-established primary and secondary industries. It has an excellent State Education Department producing large numbers of students at the matriculation level. In a separate state department, that of technical education, there are excellent technical colleges producing technicians of many kinds, and offering higher trades courses and certificate courses in a wide range of subjects. Academic universities are strongly represented by the University of Sydney and by New England University College, which is shortly to become autonomous.

In 1949 the state government created the New South Wales University of Technology and gave it the following objects: (i) to provide facilities for higher specialized instruction and advanced training in the various branches of technology and science and their application to industry and commerce, and (ii) to aid, by research and other suitable means, the advancement, development and practical application of science to industry and commerce. These objects were defined in an Act of Parliament passed in 1949.

The University was established under a Governing Council which contains persons chosen for their knowledge and experience in university affairs, industry, commerce, trades unions, government, technical education and the professions, together with representatives of the faculties of the university, its staff, graduates and undergraduates. The Council is an autonomous body, subject only during

a transitional period in relation to staff appointments and similar matters to the New South Wales Public Service Board. This transitional period is expected to terminate at the end of this year. Although this clause in the Act has been the subject of some criticism, as implying a lack of freedom on the part of the Council, there is no doubt that in the early years, before the University had acquired its permanent staff, the guidance and help of the Public Service Board, which has never been in conflict with the wishes of the Council, has been of great value to the University.

The University has established schools of civil, mechanical, electrical, mining and chemical engineering, applied chemistry, mathematics, physics, metallurgy, wool technology, architecture, applied psychology and economic history. Degree courses have been established in most of these subjects. Graduates have been produced in the main engineering and science subjects.

The basic problem in the rapid development of any new university is the acquisition of suitable staff and accommodation. The University of Technology was fortunate in being able to take over an excellent group of lecturers and research workers who had been gathered together in the State Technical Education Department to conduct diploma work, and also to acquire the laboratory and other facilities which had been provided for that purpose. As a result, the schools of chemistry, physics, chemical, mechanical, civil and electrical engineering, have found ready-made buildings and laboratories of a reasonable standard in which to commence their work. The University has added to both staff and faculties since its formation and is creating substantial new buildings on its new site, which is to be its permanent home.

In 1951 it was decided that the University should take over the conduct and administration of certain part-time diploma courses, previously run by the State Technical Education Department, where these were in fields, or closely allied to fields, in which the University was conducting degree courses. These particular diploma courses were of a high standard and were generally accepted by qualifying professional institutions as being roughly the equivalent of at any rate some university degrees. This step foreshadowed a most important decision of policy, namely, that the University would accept the responsibility for providing part-time study routes to all its degrees in science and engineering, as well as whole-time courses, and the ultimate replacement of some of these diploma courses by part-time degree courses is a logical development.

A very close association is maintained between the University and the technical colleges, and a smooth route exists for the boy who leaves school before matriculation and enters a trade course to pro-

ceed to the University. The technical colleges provide, in addition to trade courses, special preparatory courses to bring such students up to the required University matriculation level, and many excellent students, particularly in engineering, have entered the University of Technology in this way.

In the formulation of its courses the University has laid down two very important principles. The first of these requires a substantial amount of practical industrial training to be part of every degree course. The manner of achieving this varies from school to school. In the four main engineering schools the courses are of four years' duration, each year consisting of two twelve-week terms with two weeks between them, followed for the greater part of the year by work in selected and supervised industrial practice. In chemistry and chemical engineering the programme is different, owing to the different structure of the related industries. In these courses the first year is three terms of full-time study; in the second and third years the student holds an industrial appointment in an approved firm and does twelve hours a week of formal study in the University by a combination of evening study and day release, while the whole of the fourth year, and in chemical engineering the fifth, is again devoted to full-time study in the University. The requirements in other courses observe the same principles, with slight variations in detail.

Although this scheme has only been in operation for five years, there is evidence that this close association of practical experience and academic training does confer great benefit on the student.

A second important principle determined by the University is that studies in the humanities should form a part of all courses. To this end a school of humanities was established under the Professor of Economic History, and a strong and talented staff has been appointed. In the day courses, studies in the humanities are carried on throughout the four years. English, history and philosophy are taken by all students in the first two years, and in the third and fourth years a selection is made from a group of elective subjects. In the part-time courses, which are of seven or eight years' duration, it is not possible to follow the same pattern, and here the experiment is being tried of giving all the studies in the humanities towards the end of the course, due allowance being made in the methods adopted for the maturity of the students. This method of introducing the humanities into technological courses has been advocated in various places, and so far the experiment seems to be producing good results.

At the present time the University has over 3000 students enrolled for the courses described. Graduates were produced two years ago for the first time, fifty-seven on the first occasion and sixty-six on the second, in 1953.

The University of Technology draws most of its finances from the State Treasury, this being provided for in the Act of Establishment.

In considering the future development of the University there are a number of points worthy of comment. With regard to buildings and accommodation, a clear site of sixty-five acres has been obtained in Sydney, and on it a group of buildings has already been completed for the school of chemical engineering. Construction of a large building is well advanced for the schools of architecture, applied physics, mathematics, mining engineering and geology, and some administration, and occupation will commence this year. A further group of buildings for the school of metallurgy has also started and will be completed this year. The general development of the site, with playing-field facilities and the amenities normally associated with student life in a university, is proceeding.

The University has state-wide responsibilities, and these are being faced in two ways. Last year the Council opened a University College in the city of Newcastle, and university classes are being conducted in two other country centres. In Sydney residential accommodation has been provided for country and overseas students, and by next year it is expected that about 200 students will be resident in this college.

In planning the future technological development of the University a number of possibilities exist. At present consideration is being given to the establishment of either undergraduate or postgraduate courses in more highly specialized technological subjects such as textiles, fuel technology, rubber and plastics technology, instrumentation and automatic control, food technology, leather chemistry, applied biology, industrial ceramics, surveying, marine engineering, building science and other subjects of that kind. Some of these have been started as diploma courses, and a good deal of postgraduate work in some of these fields is being done.

The Act of Establishment lays clearly on the University the task of conducting research. All sections of the University are building up research schools, and a considerable number of postgraduate students are now working for the degrees of Master of Science or Engineering and that of Doctor of Philosophy. Research work shows a satisfactory distribution of subject between purely fundamental work and research, sometimes sponsored, of an applied nature.

The New South Wales University of Technology is today only five years old. It has galloped through a development which has taken other universities many years to cover. To those of us who are associated with it it is a great and exciting experiment which may prove or disprove more controversial issues about universities and technological education in the next ten years than could be cleared

up in half a century of argument. At this stage I can only say that the results so far are good, and the future appears to be promising.

Sir RODERIC HILL (*Rector, Imperial College of Science and Technology, University of London*): After the excellent review which Professor Baker has given us of the teaching of engineering science as an academic discipline in the University of Cambridge, and after the interesting pictures which Dr Venkataraman and Professor Baxter have given us of the forms which technological teaching is taking at university level in their respective countries, I am going to consider myself liberated a little from such considerations in special places and beg leave to take you into a rather freer atmosphere, where mistakes will be harder to detect. Lest any of you should wonder why it is that I was asked to make my contribution to this discussion, I shall put it no higher than this, that I am a university administrator with a mild weakness for science and technology, which at Imperial College is at the present time being perceptibly indulged.

I hope that I shall not shock the engineers in this audience if I start with a story about a physicist, a great Cambridge physicist, namely, Lord Rutherford. This story was told last year by Sir Henry Tizard when talking to the Society of Chemical Industry at Aberdeen. The story is that many years ago Sir Henry had occasion to say to Rutherford 'Did you see the other day that yet another physics laboratory in the United States has been given a large endowment for research? For the life of me I do not know how we are going to compete in this country.' To this the great physicist replied, in that robust and forthright way of his, 'You have got it all wrong. You have not begun to understand our advantages; we have no money, and so we have to think.' Incidentally, this little incident did not prevent Lord Rutherford some years later from accepting a large endowment for the Cavendish, but that later capitulation cannot dim the light, if it is a true story, of the earlier flash of virtue.

It is incumbent on us to think even harder today, particularly in the technological field, which embraces the great profession of engineering, because we are burdened with this tremendous legacy of scientific discovery and all that it has meant to us, and increasingly one feels that preoccupation with the means, the tools, the techniques, the instrumentation, clouds constructive thought about the ends and interferes with satisfactory judgement on what they imply, so much so that one might be tempted to think that this was a new problem, a kind of occupational disease. It is, of course, nearly as old as the hills; one can see it, to take one example, when Bacon wrote his plea for the advancement of learning, and he had to face obstacles not so crystalline as ours but more amorphous and metaphysical in the

medieval belief that natural science somehow dealt with forbidden knowledge. He realized, as he said, how different the approach had been in the days of the ancient Greeks, and he set out to prove that natural science and its results in engineering were Promethean and not Mephistophelian; that is to say, of the gods and not of Satan.

If we follow Bacon back to the fifth century B.C. we find the great dramatist, the father of Greek drama, Aeschylus, foreshadowing the advent of technology, and the spark of fire which Prometheus hid in a hollow fennel stalk and gave to man was a remote and distant precursor of modern steam engines and diesels in industry. In those early days one feels that men's minds could roam more freely in different contemporaneous worlds; divided they were in truth, but they were more accessible. It is only fair to say the Greeks did not have to bother with the economic prizes and penalties of technology, because in so far as the slave world was excluded they could move more freely; nevertheless, that does not exclude the great part played by a greater liberality of mind. After all, it is surely true also that Aeschylus grasped the notion of a civilization rising to greater heights by the achievements of knowledge and, as Sir Richard Livingstone says somewhere, the material basis of this progress was the discovery of *τέχναι*, of arts, not the fine arts but the useful arts, discoveries in mathematics, writing, transport, medicine and, above all, the discovery of fire. When one sees the part that fire, combustion, plays in any modern department of chemical technology or engineering, or mechanical engineering for that matter, one is tempted again to say 'and above all of fire'.

It is a long haul from that to the other day, when Professor A. V. Hill spoke at the Assembly of Faculties at University College, London. He was reported as deploring the contrast which is being made between the field known as the humanities—perhaps in the old days one might have called it rhetoric—and the sciences. He alluded to the change which had taken place almost without people noticing it, for, after all, there was no substantial question that the humanities could exclude the followers of such science as there was in the earlier times. You can find a restricted outlook here, there and everywhere, but it is not right to consider it uniquely applicable to the followers of science and technology.

How does this excursion into the past bear on what we have to do today? I should be the last to deny that the rigours of academic discipline in one recognizable field for any given human being were not normally indispensable, whether in the arts or the sciences; yet, however much you have to encourage depth of penetration in a given field—and that must be got somehow at higher levels of education—it still remains true that the need for training in human excellence,

as has been said by almost every speaker here, remains ineluctable. I was interested to find that in various organizations for teaching technology there is an increasing tendency to try to effect a more liberal view, but of course in practice things naturally do not go quite so well as they would in ideal conditions, and academic staffs, if they become too absorbed in their own fields, bid rather fiercely for the student's time, and where that process is excessive—it is not always so—the attention of the student becomes attenuated and he is unable to pay proper attention to his own discipline. It therefore comes about that this aim is difficult to achieve; it is difficult to reconcile fully the need for proper vocational training with the broader aspects of education for life.

To get back to the question of technology, the Chancellor of the Exchequer recommended us to read, as he had done, the latest report of the University Grants Committee. If I quote from a page of it, that does not mean that I have read the whole report yet, but on page 75 it says that increased expenditure on scientific teaching and research cannot be regarded from the national point of view as being optional, because our dependence on manufactured exports makes it essential to keep pace with our competitors in scientific knowledge and its application. In other words, we must do it; but, as I see it, there is a catch in this. For example, if our behaviour were generous just because it paid us to be generous that would not, I think, be the exclusive reason why we should be so; and, to take another analogy, to seek the advancement of knowledge just because we must advance knowledge for material reasons is not a sufficient reason why we should try to advance knowledge in that field. The report of the University Grants Committee goes on to say: 'There has been agreement on one point at least, the need for securing a large increase in the number of those undergoing training in applied science and technology.' We know that about fifteen years ago, in 1938, the number of technological students in this country was a little over 5000. It is now over 10,000, but it has been a little higher in the interval, and that is commented on. This represents only about 12 per cent of the student body as a whole, and so far as entry is concerned, pure science is more fashionable than technology and more attractive to young people at the moment, but things may change.

The decline in numbers on the technological side is discussed very sympathetically in this report, and I think no one can say that the Committee has not made the most determined efforts, sometimes by judicious financial support, to encourage the study of technology. They go so far as to say in their report that in putting forward their plans for further development they have assumed that in the course

of the next few years the problem of the recruitment of technological students will be solved.

Let us suppose that it is so. Suppose that we train many more technological students. A large number of them will be engineers, with all the requirements that Professor Baker has given us for accepting a great mission, something much more than merely having some knowledge; a question of behaviour and the understanding of professional codes. What happens to them depends on how we teach them and what we set before them, not only in England but in every university in the Commonwealth, and indeed in the world, which enters this field. It depends on whether we can put over to these young people something grander and greater than the mere stark necessity of having to do this thing because we must save our skins, or at least our standard of life. It is a 'must', as is made perfectly clear in this report, but a great deal depends, in my opinion, on the interpretation which we put on the word 'must'. Are we to do it just because we are driven to do it? Plato had no two minds about this. He had thought it all out. There are certain 'musts' in life, but the question is the motives which guide you in following out that destiny. If we get the wrong sort of 'must' we shall bust, so we had better think hard about it. Failure at any time on the material side is undeniably sad, but on the ethical side it is just plain bad; and so, in following this up, we have to think how technological education can take its place with the other disciplines in an honourable companionship. If it is to do that, it must accept the older disciplines. Some people may think that they are accepted by it, but it must accept them in the spirit in which it hopes itself to be accepted. If it can not only teach young people what they ought to do for the economic life of the country but give them something much more than that, something which I hope will engross their higher aspirations, then I think certainly on those conditions it can be accepted and will be accepted in line with the other great disciplines of the past, and it will affect them and be itself refined and affected for good.

DISCUSSION

The CHAIRMAN: It is most important that this higher technological education should be done within the university proper, not only because it is good for the engineer to be there but because it is good for him to rub shoulders with all sorts of other people who are going to be administrators, doctors and so on and with whom he will have to work in after life. Unless they have a community of interest in their undergraduate career it will be very difficult to bring them together again afterwards.

A second point, on which I want to support Professor Baker very strongly, is that the engineering course in the university should be fundamental and should not be too long, because it is so important that the young university-trained engineer, when he goes out into the cold world outside, shall not have a chance of teaching his grandmother to suck eggs. What is wanted is that he shall go out to learn his profession after he has had his training, and he can then, after two or three years as a minimum, return to the university and bring with him a great deal and learn still more when he comes back, learning then on the basis not only of his original university training but also of his experience in the world outside.

Dr A. E. CAMERON (*Nova Scotia Technical College*): It is very difficult to return to a general survey, having listened to that excellent address by Sir Roderic Hill, but I feel that the Canadian picture should be surveyed very briefly. There are eleven institutions offering courses leading to an engineering degree in Canada. Ten of these offer courses in all six major branches of engineering—civil, electrical, mechanical, mining or mineral, chemical, and metallurgical engineering—while the other offers courses in civil, electrical and mechanical only. In all cases the course content is divided into two major sections with, of course, a certain amount of overlap, and it is on this amount of overlap that the greatest differences show up.

The two divisions are science and the humanities, usually concentrated in the first two years of a four-year course, and technology, usually left to the last two years. I am afraid that the humanities—languages, history, philosophy and so on—are continually assuming a minor role as the advances in science require a greater and greater amount of time if they are to be adequately covered in advance of the need for them in the technological studies. It is obvious that modern science cannot be adequately covered in two years of twenty-six weeks each, and so science tends to crowd out the humanities at one

end of the picture and to encroach on the time required for technology at the other.

The principal difficulty lies in the fact that the Canadian universities for the most part cannot afford two science staffs, one to teach the arts and science faculties and the other for applied science, so that in most cases engineering students have to attend courses in physics, chemistry and mathematics primarily designed for arts and science students, though the assigned time for the courses for those faculties is based on the normal five or six courses per term and not the eight or ten courses per term of the engineering curriculum.

The academic term today is twenty-six weeks of thirty to thirty-six hours' attendance at lectures or laboratory, and all faculties of engineering are conscious of the fact that this is too heavy a course for students to be able to do any outside or library work. Reductions can be found only by the sacrifice of those courses which are not strictly scientific or technological. The social sciences have to find their place in the curriculum along with the humanities, and I believe I am correct in saying that we estimate that about 10 per cent of the academic time allotted to the humanities will also include the social sciences.

Technology, of course, has many branches, and the six which I have mentioned are the classic subdivisions. Certain institutions in Canada give a further breakdown into geological engineering, engineering physics, aeronautical engineering and so on. Up to the present no Canadian institution has offered courses in naval architecture, though architecture itself is normally considered as a portion of the faculty of engineering and applied science. Specialized fields such as fuel technology, food technology and fisheries technology are offered in certain institutions or are being considered for future development. In some cases these are offshoots of departments in the faculties of arts and science rather than under the faculty of engineering.

The important field of apprenticeship training is not normally included in the curriculum, although all students are expected to spend their long vacation in the summer, from 15 May to 15 September, gaining practical experience and must have reports from their employers certifying satisfactory application at the work undertaken. At least one such vacation must be spent in the principal field of the student's studies. In past years most universities have had more or less extensive shops for practical training, but these have been largely abandoned, and the student makes his own contacts with industry for summer employment.

I am convinced that Canada can learn something from the United Kingdom and from other Commonwealth countries about methods

of combining technological education with the academic course, but that learning must be applied to Canadian industries as much as, if not more than, to the institutions of higher education. Canadian industry will take the undergraduate and give him employment with a certain amount of systematic supervision over his training, but the emphasis is not there, and there is very little if any interest in such schemes as the 'sandwich' system mentioned by Professor Baxter. The picture is better at graduate level. Many industries have systematic graduate training schools, and there is, each spring, a definite spirit of competition between industries for the brighter students of the graduating class. The young graduate with little practical experience but a good academic record is taken on the strength of the industry at good pay rates and given a one-year or two-year apprenticeship course of virtually full-time training.

The Canadian industries which offer these courses appear to feel that it represents a saving in the long run. They have the pick of the bright students, and the wastage is very low. The electrical industries are well advanced in this scheme, and the mechanical industries are entering into it. There are definite signs that the chemical industries will do so also. The mineral industries, and particularly the mines, must come round to it or undertake an undergraduate scheme on the lines of United Kingdom methods. There is a definite shortage of young men offering themselves for professional work in those fields. The situation is undoubtedly acute, and the difficulty can only be overcome by these industries taking a more important place in engineering educational systems.

Dr P. DUNSHEATH (*London*): It is essential in a discussion of this kind where we are so limited for time to turn to some fundamental issue which may have relation to the whole subject rather than to take any of the many hundreds of details which could be profitably discussed. I suggest that one of these is the need to appreciate that higher technological education means, in the long run, industry. Realizing that fact we see that the most important part of the subject which we are discussing is the procuring of closer relations between the universities and industry.

The reasons for this can be very briefly summarized. Industry today is a controlling factor in modern life. Not only so, but it is becoming a more controlling factor as the years go on. Industry is growing rapidly, and will decide our future more than any other factor in the modern community. Industry also at the present time needs improved leadership. That is a platitude which has been said so many times that it hardly needs to be repeated, except that frequently we hear discussions in which it is ignored notwithstanding

its fundamental truth. Not only does industry need improved leadership, but it requires that leadership not only in applied science but also in all the branches of learning which lead to improved human relations. In industry today we fail not because of our lack of science but because we cannot always get people to work together to apply that science. Whenever there is a major breakdown in industry, it is in almost every case because of the human factor and not the mechanical or scientific factor.

As communities we are naturally looking to see how we can improve this situation and it is obvious that both the universities and industry have their part to play in this matter. Industry has to be taught to appreciate what facilities are available in the universities today. As Professor Baker said in his admirable address, industry to a certain extent is educated and is in touch, but he is talking of a small percentage of the total number of industrial concerns. There are only sixty concerns in this country employing more than 5000 people, and from fifteen to twenty times as many people as are employed in those firms find themselves in much smaller industries and much smaller organizations. It is there that industry has to be taught what is available for its own good. It has to be shown its needs for the employment of graduates. Industry, including some of the large firms as well as the small, has also to be taught how to introduce the graduate into its organization; in many organizations he is a new animal. He is not welcome and is not given a proper initiation to make him more useful and here industry has an important lesson to learn.

What lessons have the universities to learn? In the first place the universities, by and large, apart from the technological and science sides of their work, lack an appreciation of the nature and purpose of industry. In many countries, including Britain, industry is not understood by the universities. In some countries it is understood very much better. In the second place the universities have to appreciate the needs of industry in obtaining personnel for applied science and for management. The present contacts are quite insufficient.

It is interesting to note in this respect the very close relation between the subject which I am attempting to explain and the question of grants referred to at an earlier session. The absence of earmarked grants in this country is not just a release of the universities from some undesirable control which was placed on them previously, but something which imposes on them an increased responsibility. The universities in the past might have said 'We are told to spend money on this or the other thing', but now it is they who have to decide. In the end, of course, the community decides

matters of this kind, and the universities therefore cannot safely neglect the national needs in allocating their resources. These needs certainly include those of industry.

There is clearly need for more direct knowledge of one side by the other. Industry must know more about the universities, and the universities must know more about industry. The solution, briefly put, is to continue the type of thing which has been done in this country so successfully during the past three years. In 1949 the Federation of British Industries called a conference with the universities, and some 150 representatives spent a week-end together; vice-chancellors and members of faculties met leading industrialists, with most successful results. Since then there have been local conferences with different universities which have been equally successful, and last year we held a second national conference. If we can continue this type of contact and so improve the relations between industry and the universities, many of the problems of higher technological education will not have to be discussed; they will solve themselves at local level.

Industry needs a larger proportion of high intellectual ability with good qualities of personality which only the universities can supply. Today the universities are getting much of the talent which formerly went to industry direct from the schools. If industry is a worthwhile public service, as those who study it know it to be, then the universities have a real responsibility for interesting the student in the outlets available in industry and redirecting the stream, after the refining process of three years in the university, to the former channels. The subject of technology cannot profitably be divorced from this more fundamental question.

Professor W. G. Sutton (*Witwatersrand*): I should like to refer briefly to our own University, where we have a Faculty of Engineering with about 700 students following a four-year course, generally having the attributes, or at least the aims, referred to by Professor Baker.

There are presumably three aims in education. First the teaching aim, which represents a responsibility to the students; secondly, the research aim, which is a service to knowledge; thirdly, the very definite one of education for a professional career. I shall limit my discussion chiefly to the last aim, since the majority of students enter universities in order to receive an education which will fit them for a professional career. No matter what the ultimate aim may be an essential requirement must be a sound general education at the university, with no premature specialization, otherwise the development of the individual's mental roots will be stunted and the limits

of growth restricted from the beginning. Education must therefore be regarded as inculcating a method of approach and inducing a habit of mind which should be maintained by the student throughout life. The alternative is a type of training, usually referred to as vocational or technical training, which inclines towards teaching skills, techniques and processes, and is associated with knowledge of a somewhat discursive nature. At the University of the Witwatersrand we do not use the word 'technology'; I think advisedly so, for it tends to have a restrictive meaning which we do not desire to associate with our Faculty of Engineering. Our aim is to provide a course in basic engineering science which will give a broad understanding of engineering principles and scientific principles applied to engineering. In the circumstances the finished university product is in fact an intermediate product, for the graduate in engineering cannot be considered to have achieved professional status until he has had a reasonable amount of organized and systematic practical training. This is really the stage at which true technological education takes place. We are fortunate in South Africa in having an enlightened industry, a great mining industry, and government departments ready to make this practical training available, and take this factor into account in determining the scope and nature of the engineering courses. We maintain close touch with the three professional engineering institutions in Great Britain, the Institutions of Civil, Mechanical and Electrical Engineers, and advise our graduates to take steps to conform with their requirements for postgraduate practical training.

We exercise some care in the selection of entrants and ask for a reasonable degree of ability in mathematics, since mathematics comprises one of the most powerful tools used in engineering; on the other hand, it is necessary to realize its limitations and avoid developing the type of student who merely shows analytical dexterity in the use of mathematics, which, as Sir Charles Inglis wrote, is often a sign of paucity of physical conception. While mathematics is a useful criterion in the selection of entrants to an engineering course, it is not the only determinant, since proficiency in this subject may be associated largely with ability to analyse; consequently we seek to find out what integrating factor is an indication of capacity for synthesis and suspect that it lies in the direction of humanistic education.

Sir Lawrence Bragg said yesterday that the humanistic education is in the nature of a vitamin. I suggest, however, that in the case of an ill-balanced diet, it is not adequate merely to add vitamins. This tendency can be observed in the mere addition to engineering syllabuses of courses of a humanistic nature. What is required is

a reconstruction of the whole course to provide a diet containing the vitamins of humanistic education and so balanced that everything can be properly assimilated.

I feel that, in the undergraduate stage, too much respect is paid to what is called research but in fact is not research, and favour the system which has been developed at Cambridge of limiting research largely to postgraduate study by persons who have had some acquaintance with practical engineering problems.

The developments in technological education in New South Wales will be watched with interest, but it is worthy of note that the University of the Witwatersrand started as a school of mines and technology some fifty years ago. Thirty years ago it became a full university, so that we may claim to have some experience of the deficiencies of independent schools of technology. This experience makes it clear that a school of higher technological education should be associated with and incorporated in a university, since various types and groups of students must be closely associated to provide the atmosphere essential for a liberal education. These contacts and the humanistic disciplines are necessary if we are to achieve cultural equilibrium.

Mr W. A. WIGHTMAN (*Association of University Teachers*): I venture to intervene in this discussion because the Association of University Teachers, which I represent here, has made a detailed study of this question of higher technological education and the place of technology in the universities. Two years ago we issued a report* upon it containing some data concerning British universities, with which I shall not trouble you now but which you will find in the report if you care to obtain a copy. It is obviously impossible for me to present, or even to summarize, our conclusions in the short time available to me, and so I shall refer only to two of them, which we perhaps regard as the most important.

In the first place, we are delighted to find ourselves in agreement with the Chairman that at all costs higher technological study must be retained and integrated within the university. It may be that one reason why we think alike is that many of our universities in this country, like the University of the Witwatersrand, have developed because of the need felt in their regions for a closer study of the fundamental principles on which the local technologies depend. We think, however, that it goes rather deeper than that. The main business of the universities is not to teach people this and that, but to train minds, and they should be able to do that just as well through

* Printed in *The Universities Review*, Vol. 23, Nos. 1 and 3 (Association of University Teachers).

the medium of technological subjects as they can through history or economics or Chinese metaphysics or anything else. If that were not true, we should not be justified in admitting technology to our curriculum. What Dr Dunsheath has just told us amounts to a plea for trained minds in industry, and it is trained minds which it is our business in the universities to produce. That can only be achieved in technological studies if we retain them within our own confines.

The second point which we consider of very great significance arises out of something which Professor Baker said. He referred to the importance of cross-fertilization between the universities and industry in the matter of research. That, of course, is admirable, and indeed essential; but we must take great care to see that, in achieving it, the freedom of the individual university teacher and the individual university department to select the type of research which should be done is in no way impaired. In the great technological institutions in America and on the continent that is not so. More than half of the revenue of the Massachusetts Institute of Technology is derived from sponsored research, and a great deal of what has been described as the 'enormous apparatus of instruction' which one can see in the technological institutions of western Europe is there not for the purpose of teaching but for the purpose of carrying out research at the behest of government or industry.

We must, above all, not allow ourselves to get into the position which actually arose in one of our universities, when an industrial organization, writing to increase the grant which it made to a certain department, expressed appreciation of the work done in the most glowing terms and, by way of climax, added 'We regard this department almost as a branch of our own research laboratories'! Whatever else we do we must keep our freedom.

Finally, I should like to tell one short and true story arising out of Professor Baker's address. He naturally talked of technology as engineering, but he did say at the outset that engineering is only one branch. A few months ago at my University of Leeds we had the honour of a visit from the head of one of the famous technological institutions in Western Europe. He gave us an admirable account of his institution, how it arose, what it did and so on, just as we have heard this morning from several speakers. In the subsequent discussion one of our own students asked a question and revealed himself to be a fellow-countryman of the lecturer. Having answered the question, the lecturer not unnaturally asked 'How is it that you, a fellow-countryman of mine, are studying here in Leeds?' 'Because', said the student, 'I want to study textile technology, and that cannot be done in our country!' It is very important to realize that technology is not simply engineering. There are twenty different

technological subjects in which degrees can be obtained in British universities, and only five of them consist of engineering or are subjects in which engineering plays a major part; all the rest are concerned with subjects in which chemistry, physics and even biology play as important a part as engineering. We have to cater for needs of that kind in this and other countries, and I hope that we shall keep that in mind in the universities as well.

Professor J. R. DAYMOND (*Natal*): I am an engineer, and, contrary to the usual custom, I made some notes last night of what I intended to say. I am not now prepared to modify them, despite the fact that they were written before I had heard the principal speakers in this discussion. Indeed, if I were of a suspicious turn of mind I should be inclined to think that some of the speakers had had access to my notes! I mention this because part of what I have to say may sound a little platitudinous and repetitive. I find myself in agreement, though not in detail, with most of the speakers, and particularly with my colleague Professor Baker, but I can assure you that, apart from discussions which we have had in private, there has been no collusion between us about what we should say.

A significant feature of the discussion on this controversial subject is the unanimity that exists among the people who matter most, namely, the engineer and the educationist. In this realm of technology, as it is called—personally, I dislike the word, and I do not know where it has come from—in relation to the universities, I feel that we have been walking for a long time with our shoes on the wrong feet, and we are, I think, in danger of perpetuating that sartorial solecism. The shoes are beginning to pinch, because our feet, in the form of technological demands, are getting larger, but the shoes are still the same size.

I want to explain briefly and simply what I mean by that. In the main, you will find engineering, in most universities, in the three categories of civil, mechanical and electrical engineering, mainly because of the accidents of history. The mistake is to associate these with subjects. From an academic or university point of view these three belong, like some of the others, fundamentally to mathematics, physics and chemistry; and the success of an engineering school, although not always readily discernible, depends, you will find, primarily on the stature of these three disciplinary subjects. (A very new, and, I think, very interesting and significant contribution has been made here on this point by Professor Baker, who rightly suggests that these three disciplines should be taught by engineers. I support that view from experience, and also because, as he said, we have a philosophy of our own.) The mistake of identifying these professions

with subjects has not been catastrophic or irremediable, but I am afraid that in trying to meet the demand to produce technologists there is a regrettable tendency for professional division of an uncontrolled nature, and for ever-growing specialization in the formative years of the student. There is unmistakable evidence of a tendency—here I speak mainly about engineering—to give instruction about How, or what our American friends would call the 'Know-how', and to deal with How something is achieved rather than Why; in other words, to train in specific skills rather than to educate. The skills required in the very large field of engineering—I apologize for talking primarily about engineering, but I think that I ought to do so—are many and varied, and the universities are not the most suitable places to cater for that need. We should never sacrifice in the universities the lasting qualities of the disciplinary subjects for skills which can be more readily and more suitably acquired outside.

It is well to remember also that the technologist does not or should not reach professional maturity until long after he leaves the university, and this means that while the time to know Why is prescribed, there is a much longer time available to know How. If we accept the provision of higher technological education in universities, we shall be unwise if we impart to the students what they can absorb critically only in maturity and outside. That precept we are putting into practice in the institution to which I belong; in the University of Natal we are encouraging students to graduate first of all in science, and then to read engineering for two subsequent years.

To sum up on this aspect of the problem, I suggest that the best way to meet the demands of this age of technology is to broaden the base of the educational pyramid and not to pile more on top. Are we clear on what is the object of this higher technological education? I think that it is an attempt to ensure the harvesting of the fruits of scientific achievement for useful and other purposes without delay. If this is to be achieved by one person, then he must know the How and the Why; in other words, he must be the technologist of maturity about whom I spoke earlier. The Why can be bestowed by the universities, but the How is best left to industry. It follows that they are partners, mutually dependent on each other to fulfil this object. It is for the universities to educate and for industry to train.

Universities need not change their pattern because of a demand for higher technological education provided they resist desires for professional subdivision and the addition of subjects to courses, e.g. the introduction of courses in production and management in universities, because it is now said that the engineer is connected with men as well as with machines. I have yet to be convinced that universities, and not industry, are the best place to deal with such matters as, for

example, production and management. At the same time, I would suggest that, since engineers are now more than ever concerned with the social and ethical implications of their work, a course in the humanities be found for them in universities.

Lastly, it would be of lasting benefit to all if the traffic could become two-way—from industry to universities as well as the more usual one of universities to industry. This should take the form of staff movements and the provision of courses in the universities on the 'Staff College' idea where the 'mature technologist' can be refreshed in the disciplines and where he in turn can talk of progress in his specialized professional field.

Technological education can best be provided not by universities alone but in partnership with industry, and a large section of industry and most universities, I feel sure, are ready to accept this view.

Professor W. H. HUTT (*Cape Town*): So far you have heard, with one exception, engineers. My task in the University of Cape Town is to assist in the training of young men who, we hope, are going to be leading administrators and managers in industry and business. Even so, although I am in rather a different field, I am concerned with techniques and technologies, and I have found Professor Baker's address exhilarating. I felt that what he had to say was really fundamental, and it entirely fitted in with my own thoughts on the subject.

Let me illustrate briefly from my own standpoint. We have a good deal to do with the training of accountants. They take our examinations first, and their professional examinations afterwards. They have a course in South African Company Law. Until a few years ago the professional societies examined in it, but now we do so. It has become a university subject. Formerly the student was expected to know virtually by heart the South African Companies Act, which is a fairly fat book, plus the decided cases. The type of question which might be asked in those examinations involved details such as the correct stamp to put on a particular document. The time spent on the kind of thing memorizing called for is wasted in a university. We find the same thing in other technical subjects. In medicine, for example, the students often have to learn anatomy by the use of absurd mnemonics. I came across a student's notebook on anatomy recently, and it was full of absurd rhymes! That type of memory work has, I believe, to be cut out of university education in the future. The knowledge which is relevant to modern life is so encyclopaedic and widely spread that the university's duty is to teach the student how to find his way about books of reference. I sometimes think that he should be allowed to come to the examinations with all the text-books and books of reference he needs.

My second point is that in the future less and less spoon-feeding can be given to the students. I am not now attacking the tutorial system. Tutorial work is important, but the type of teaching which consists of dictated notes, which is still common in technological education in some universities of the world, is out of date. Nor is there room today for the school-teaching type of university work which calls on the student to attend twenty-five lectures a week. In certain engineering courses the students are continuously engaged in lectures for five hours every morning, whilst in the afternoons they have practicals. That is not true university teaching, which should consist of discussing critically the text-books and literature, inspiring the students, correcting their written work and so on.

My third point has already been made this morning, namely, that at the undergraduate stage—say the first three years—'learning by doing', the acquisition of skills, can hardly be carried on to any extent. Wisdom in action has to be acquired mainly in later life.

Finally, there is another point which has already been made, but which should be made again, about closer relations between the universities and industry and the professions. Although we, the universities, ought to know very well the needs of the professions and of industry, we must beware of allowing the professions or industry to dictate our teaching. We have to handle them tactfully, but we have to show them that there are some things which we know better than they do, just as there are many things which they know better than we do.

In conclusion, I feel that in all the technologies, it is going to be very serious if the universities fall into the trap of becoming pre-occupied with tools and techniques through responding to pressures from industry and the professions. As has been very well said this morning, the field of the universities is Why; we must leave it to life to teach How.

Professor J. F. Baker (*Cambridge*): The discussion has been excellent, as most discussions on this subject appear to be. Although I have taken many notes, I have not yet reduced them to the few words that are necessary at the end of a meeting. What stands out for me as important is that we seem to agree that the universities must keep technology, and I think there has been really no dissent from the view that the universities have, as Professor Hutt said, to teach Why and allow life to teach How.

In my reference to collaboration with industry I did not touch on the question of maintaining the independence of the university. My experience is that if we are thinking of the dangers of sponsored research we should bear in mind that the scientist who is worth his

salt always knows the problem with which he wants to deal. Our happy experience here so far has been that we often find some organization which thinks that this idea is worth supporting financially. But I was not thinking, when I spoke earlier, of collecting money from industry; I wanted collaboration to be that of minds and interests. I should be very much happier to be quite independent financially of industry. We must always have enough financial independence to allow us to follow those lines which are not popular with industry but which may lead to developments which are for the good of the community, and that can happen.

It is most reassuring, after what has gone on in this country, to hear this unanimity that technology must stay in the universities and must be used as a real cultural activity and not as a professional study.

SECOND SESSION ON SPECIAL TOPIC

(*For First Session see p. 122*)

'WHAT SUBJECT OR SUBJECTS TODAY ARE BEST FITTED TO FULFIL THE ROLE PLAYED PREVIOUSLY IN THE UNIVERSITY CURRICULUM BY THE CLASSICS?'

Chairman: LT.-COL. A. B. A. HALEEM
Vice-Chancellor of the University of Karachi and Chairman of the Inter-University Board of Pakistan

Opening Speakers:
DR HENRY M. WRISTON (*President of Brown University*)
DR T. ALTY (*Vice-Chancellor and Principal of Rhodes University*)
SIR MAURICE BOWRA (*Vice-Chancellor of the University of Oxford*)

SUMMARIES OF ADDRESSES

The following summaries provided by the opening speakers were printed in the Congress programme:

(*a*) PRESIDENT HENRY M. WRISTON

In answering the question, 'What subject or subjects today are best fitted to fulfil the role played previously in the university curriculum by the classics?' I shall take the view that no choice of subject-matter can fulfil that role because the classics themselves were not a 'subject' but a literature which covered many phases of human experience. The classics could have continued to function in modern times if they had been taught with the insight, the enthusiasm and imagination which were displayed during the Renaissance, but because their instruction became formalized, it became sterilized.

No 'subject' can replace the classics, but all subjects must be taught with the zest, conviction, and insight with which the teaching

of the classics was once invested. This requires recognition of different sets of disciplines, that is to say, the essential modes of thought appropriate to the several studies—the inherently characteristic method of attacking that kind of problem.

I shall suggest four such disciplines: first, the discipline of precision where the essential mode of approach requires absolute accuracy, as in some phases of mathematics or logic; second, the discipline of appreciation, which is the fundamental manner of approach to aspects of thought that must be emotionally apprehended; third, the discipline of opinion, which is especially valuable in the social studies where absolute right and absolute wrong cannot be proved; and, finally, the discipline of reflective synthesis which, like appreciation and opinion, is wholly individual in character, consisting in the creation of patterns of thought that must be viewed subjectively for coherence.

The object of these remarks is to divert attention from sterile curricular questions and direct thought to the teaching and learning processes.

(*b*) DR T. ALTY

The subject will be approached from the viewpoint of the natural sciences which today occupy the dominant position previously held by the classics. To what extent can science produce in its students qualities similar to those which derive from the discipline of the classics? It is suggested that, before the growth of technology, the scientific discipline was in many ways comparable with that of the classics, and that science can be a worthy successor to the classics.

The impact of democracy and technology on the universities during the past fifty years has had a marked effect on all students, classicists and others alike, but upon scientists most of all. Today science is suffering somewhat from its own success and is overlain by the great expansion of technological and professional schools. The problem is to devise means of inculcating some of the values and outlook of the classics into the immense present-day structure of technology. Possibly this may best be done through a subject of direct interest to technologists, i.e. through the study of fundamental science itself. It is therefore suggested that while perhaps no subject can wholly replace the classics, much could be done by attempting to extend, in the teaching of technology, the spirit and outlook of the pure scientist of the nineteenth century, or, indeed of today.

Consideration of how this may be done: the 'mass production' of technologists should be reorganized, large classes being broken up into smaller groups with more personal contact with staff, provision of courses in history, philosophy and methods of science, etc., should

be greatly expanded. It is suggested that some subject of cultural interest be included in the university training of all scientists, e.g. a modern language and its literature, sociology, etc., and that such work might be particularly beneficial to the high proportion of scientists who in middle life turn from active science and become administrators, works' managers, etc. Whatever subject is so included should be related to the student's main interest and to his future field of work.

The need for some scientific discipline for the non-scientific student is considered as it is believed that the acquisition of the scientific habit of mind is as important to the classicist in this modern age as is that of 'humanity' by the scientist. Therefore the need for some science for the non-scientist is discussed.

(*c*) SIR MAURICE BOWRA

What is a classic? A work of art whose worth has been proved and justified by generations. As such it has a permanent value such as few other works have and demands study for its own sake as one of the triumphs of the human mind, which still has much to teach us and much inspiration to give. We need to study such classics partly for their own worth, partly because they make us conscious of the past and through the past of the present. Any university which neglected the classics in this broad sense would become a mere technical school. The special case of the Greek and Roman classics is part of the general problem. Fundamentally we study them for their intrinsic excellence, their humanity and their wisdom, but we also study them because they contain the germs of much that is most valuable in our civilization. Though we may learn much about them from translations, this is never quite satisfactory because we need the contact with the living word. Only through that can we get the full experience which the classics have to give us. This knowledge is needed in universities not only for its own sake, but for the study of English and of modern languages, for large parts of history and especially the history of science. Every university ought to have a department of classics. It may be quite small, but it is needed at least as a centre for consultation and help. Because Greek and Latin lie behind so much of our culture, their influence spreads everywhere. For relatively new subjects such as comparative literature or linguistics a knowledge of them is indispensable. The difficulties of them are exaggerated. It is quite possible to begin Greek at the university and to get a very fair knowledge of it. We cannot expect everyone to be a first-class scholar, but that is no reason why those who wish to know Latin and Greek should be prevented from learning them.

OPENING ADDRESSES

The CHAIRMAN (Lt.-Col. A. B. A. HALEEM): This is our second session on the Special Topic the discussion of which was started yesterday, namely, 'What subject or subjects today are best fitted to fulfil the role played previously in the university curriculum by the classics?' Last night we had the privilege of listening to a very interesting discussion. We heard a number of learned, thoughtful and illuminating speeches by very distinguished persons. The speeches ranged from grave and solemn to witty and satirical, and the discussion was so interesting that, even though it was getting very late, the members of the Congress found it impossible to go to sleep in their chairs.

This evening also we have some highly distinguished scholars on our list, and therefore we can confidently look forward to hearing speeches of a high order. When I was a schoolboy, we in the Indo-Pakistan sub-continent used to refer to America as the New World. I think that it is in the fitness of things that our discussion should be started by a speaker from the New World; let us hear what the New World has to say on this topic. I have great pleasure in asking Dr Henry M. Wriston, the distinguished President of Brown University, to open the discussion.

Dr HENRY M. WRISTON (*President of Brown University*): I find that I am the last of the American guests to speak, and I must therefore, before entering on what I have to say, express again our gratitude. My reputation is not for the product of the bee, which is honey, but for the other activity of the bee; none the less, so overwhelming has been this hospitality that I cannot fail to express our deep gratitude.

The question posed for discussion strikes me with particular force, because I belong to the final group brought up in the classics in America. Though I attended the public schools (in the American sense) I had six years of Latin and three of Greek before going to college, and continued both subjects when I arrived there. With such a background, I found the phrasing of this question arresting. It takes for granted that the classics will never again play the role which they once did. Certainly no one from the United States could quarrel with that thesis, for it is a quarter of a century since the classics had so much educational discussion in a distinguished gathering as it has already had at this one. Once their primacy was lost, within a very few years the classics virtually disappeared as a foundation for a curriculum.

My explicit answer to the question is that no single subject and no group of subjects can fulfil the role once played by the classics. In order to achieve the values which they represented they must be replaced by a whole series of curricula, and all the alternative groups will fail of their purpose unless each is specifically organized round some coherent idea. The educational philosophy and structural approach are much more important than the subject-matter as such.

The classics constituted a curriculum in the truest and most accurate sense. They comprised a relatively small and compact body of literature. Everyone read the same works in the same order and could share his thoughts, if any, with his fellows. Since they were in strange tongues, they required a special effort to understand them; every word and every phrase had to be scrutinized to extract its full and precise meaning. Until the art of translation had been lost there could have been no such preoccupation with semantics as to produce so much elaboration of the obvious with such ponderous prolixity as that to which we are now accustomed.

The substance of the classics encompassed logic, philosophy, ethics, aesthetics, politics, economics, history, biography, oratory, poetry and drama, both comic and tragic. Every basic issue which has confronted the human mind and spirit was dealt with movingly, profoundly, unforgettably. The student was offered vicarious experience in every fundamental human problem. Nothing in the great drama was irrelevant, for every situation had its analogue in the student's own life. That is amply proved by the fact that those who knew the classics filled their mature discussions of great issues with classical allusions—and that applies even to the satirical Mr James yesterday.

In that curriculum the inevitability of progress from cause to effect was high-lighted and could be studied without the distortions occasioned by personal interest. The student followed the struggle, participating imaginatively with intellect and emotion. The classics promoted this disinterestedness because, save for prospective teachers, no gainful skill resulted from their study. Economic competence as such was not the objective; the desired end was the personal development of the student as a human being. That was the only and the full justification for calling the study of the classics a liberal education. Its central purpose was to enlarge and release the individual's powers through rigorous discipline of the mind and the emotions. No modern substitute curriculum should be called liberal which does not retain that as its prime objective.

The whole educational process was made more manageable because human experience was, in effect, upon a laboratory scale. The known world was compact; its complexities were the involvements of human ambition, greed, passion, hatred, love, awareness

of beauty and sense of proportion which could be studied, yet its meanings were infinite, even as a laboratory experiment may shatter the earth, like atomic fission here at Cambridge. We still confront similar tragedy and comedy, greatness and petty-mindedness, the effort to know ourselves and something about others. Neither the issues nor human nature have changed very much; what has altered is the environment within which life's fundamental questions must be faced.

For the few who still use the classics as a curriculum, the process is as valid as ever it was. There is nothing wrong with such a course of study that brilliant teaching and a strong will to learn cannot cure. The classics were not displaced because they had ceased to have relevance for moderns nearly so much as because they suffered the debilitating vices of monopoly. The men of the Renaissance had attacked them with tremendous energy and enthusiasm, with freshness of vision, and with a passion to cull from them wisdom and beauty. The attainment of a privileged curricular position drained away those enlivening qualities; it had the same debilitating effects on education that have so often been found in the case of protected and over-privileged trade and industry. Fire, enthusiasm and imagination disappeared, and in their place there came formalism and sterility. It became a fact beyond dispute that the values and virtues of the classics, which I, like thousands before me, have extolled, were not realized in practice for many, and indeed most, modern students. St Paul's dictum was newly exemplified, 'The letter killeth but the spirit giveth life.' In that situation the classics could not compete effectively with the new subjects which had caught the imagination and enthusiasm of this generation. In the face of such dynamism argument was futile and nostalgic pleas merely pathetic.

I have discussed the classics at such length not to defend them in a battle long since lost but to suggest the dimensions of the problem posed by the specific question before us. The point which I am labouring is that, given a respectable subject-matter, the method of attack and the educational objectives are more important than the specific material which is studied. It is common experience to observe that the same subject, under different inspirations, can result in little but technical skill on the one hand or in liberal enlightenment on the other. We are all familiar with commercial art, which displays slick techniques but remains devoid of those qualities which have made beauty so rich a human inheritance. It is therefore a commonplace—although, like many other familiar things, often overlooked—that the same subject-matter may be strictly vocational or broadly cultural, depending on the approach and the emphasis.

Almost any group of substantial subjects can be organized to give the students five essential experiences. First, time perspective. It is necessary to inculcate the idea of historical cause and effect. It is accepted as inevitable in science, but in politics and economics men always hope to escape that progress from cause to effect.

Secondly, space perspective. Without awareness of the infinities, the student may remain egocentric. Without knowledge of the enormous energy and complexity of the sub-microscopic he can never appreciate man.

Thirdly, cultural perspective. Every effort to dodge responsibility to learn languages other than our own is an assault upon this vital element in education. It is one of the modern ironies that the more we know about linguistics the less students are able to acquire alien tongues. Among the languages are music and art, non-verbal expressions of beauty.

Fourthly, social perspective. In an age of world-wide socialism, Tory or other, there is no need to elaborate that.

Fifthly, no curriculum is worth while which does not stimulate the student to develop a personal philosophy, some organized structure of values meaningful to his own life.

It will be observed that all these educational experiences are directed to the inner development of the individual rather than to the acquisition of skills, but there is no necessary and no rational hostility between the two. The apparent inconsistency arises from substituting distortion of emphasis for a sense of proportion. The man who asserts that he has learned to get rich with no 'cultural nonsense' thrown in is no greater fool than the intellectual snob who boasts that he never learnt anything of the slightest utility at school. The vital difference between vocational training and liberal education is whether the major emphasis is put on a gainful skill or on personal growth. Everything that we know about modern problems cries aloud for a restoration of balance between technical competence on the one hand and wisdom on the other. We need both, but no one can doubt that the former has far outrun the latter.

How can we arrive at a happy synthesis of these complementary but competing interests? It cannot be attained in terms of specific content. I suggest it has to be realized in the identification and cultivation of a series of basic disciplines. By 'discipline' I mean an inherently characteristic mental method of attack on a specific problem of knowledge. The word does not imply the mere techniques of the subject; it refers to fundamentals without which the subject may not be successfully mastered. Those essential elements, those intellectual ultimates, are the disciplines, and a person must experience the disciplines. I use the word 'experience' to differentiate

it from the process of imparting information which may be called stuffing, merely transmitting to the student what the professor thinks, so that it is in no sense an experience in the life of the student. I use it also to differentiate it from a drill. Drill is repetitious and uniform response to an outside command; it is essentially mechanical, and may be automatic. Both are the antithesis of experience. Experience is subjective; it is realization for oneself. It can never be mechanical, and it cannot be precisely repeated, because genuine experience alters the personality, and after that subtle change one cannot have precisely the same experience again.

The process which I am suggesting facilitates the transition from education in the sense of schooling to education in its larger connotation. If one has some mastery of the basic disciplines, one is in a position to attack new fields independently, as an adult should. They provide a method for continuous experience. The result is a dynamic relationship to learning.

I am going to suggest, with great brevity, a rough specification of these disciplines. The first is the discipline of precision, the simplest and most elementary. It lies, for example, at the root of arithmetic. In that field approximations are valueless; if the decimal point slips the results are worthless. There are relatively small areas of learning where things are all black or all white, but never grey. Within this restricted sphere, absolute precision is of fundamental significance. Therefore it is essential to identify this discipline and to give the student as much and as diverse experience with it as possible. In the higher studies, the physical sciences require precision to an extraordinary degree. Grammar and vocabulary—except in the United States!—have something of the same inflexible quality. Much history teaching is flabby and useless for, because of the reaction against the memorization of dates, we often overlook the fact that precision of sequence is needed for sound judgement with regard to cause and effect. The most characteristic discipline of philosophy and economics is certainly not precision, but both depend on logical processes where the discipline of precision is the essence of the matter.

The second basic discipline is appreciation, an assertion of the validity of emotional experience as worthy of recognition on a parity with intellectual life. It is founded upon the fact that emotion has a quality of cultivability, that emotional life may be enlarged, enriched and made a more significant element in one's total experience. Without appreciation there is no art, no music, no literature; for the person lacking emotional response those things simply do not exist. What is art to one, therefore, may be utterly meaningless to another. In educational circles the emotional life has customarily been regarded with some suspicion. Poetry that is picked to

pieces in the discussion of its provenance, the metre, the rhyming or want of it is often rendered intellectually intelligible but emotionally worthless. Literature is essentially an effort to convey significant truth in a form depending on emotional response for its effectiveness, but all too often the critical approach drains out all emotional appeal and leaves it sterile and didactic. Over the years we have done less to stimulate rich emotional response than active intellectual interest.

The third discipline is the discipline of opinion, the construction of coherent hypotheses from available data. Essentially it is the mode adopted in the social studies. It represents an idea more difficult for the student to comprehend than the first two. He can grasp the difference between the right and wrong solution of a mathematical problem, and appreciation, being an individual matter, carries a certain absoluteness; one's emotional response is likely to be definite. The discipline of opinion involves the construction of a pattern of thought which is not demonstrably right but subjectively coherent. It may be contrary to another person's view which is equally unprovable. Dealing with the same data, two people can arrive at opposite conclusions. Neither can be proved right and neither can be proved wrong. That is a difficult idea for the student to master. This discipline leads to a recognition of the necessity and the genuine validity of tentative conclusions. The discipline of precision shows the relatively limited range of the absolute; that of opinion shows the enormously wide realm of the relative.

Instead of the discipline of opinion this might be called the discipline of hypothesis. It is fundamental to the sciences. Prevailing opinion on many scientific issues differs from the hypothesis favoured a generation ago, yet such manifest instability does not affect the validity of hypothesis as an instrument of thought. This reality is swallowed with relative ease in the sciences, but men gag at it in the social studies, because we have not recognized or gained adequate skill in the use of the discipline of opinion. No one can be said to have an education until he has been delivered from dogma on social questions. He must set about to make a working hypothesis on which to predicate his responsibilities as a citizen, but he must be ready to alter that hypothesis and to view with philosophic calm the momentary triumph of thought and action quite at variance with his own. In America we have had twenty years of experience of that! The relative failure of the social studies arises from the fact that they have not aimed at that particular goal.

The final discipline is the discipline of reflective synthesis. It asserts the validity of personal intellectual experience. In common with the discipline of opinion, it involves the creation of hypotheses.

Its distinguishing difference is that the data are not observed phenomena of an objective, tangible and external character, but ideas and concepts. It involves the effort to give reality not merely to observation but to every form of personal experience. It is an effort to find meanings not only in the world about us but in life itself.

What are the implications of these basic disciplines for the curriculum? Sir Lawrence Bragg talked about foods which are rich in vitamins; in the same way many fields of subject-matter are rich in the several basic disciplines. We should choose those which from the evidence before us seem the most suitable for our purpose, but our emphasis should be not so much upon the content as upon their relationships in time, in space, in culture, in society and in individual life, and on the characteristic modes of approach to their mastery.

The CHAIRMAN: Our next speaker is Dr T. Alty, Vice-Chancellor and Principal of Rhodes University. I have had the privilege of listening to a very interesting convocation address from him, and therefore I am looking forward with great interest to his speech this afternoon.

Dr T. ALTY (*Vice-Chancellor and Principal of Rhodes University*): After hearing President Wriston's delightful address, I wish to adopt a more modest procedure and look at some of the difficulties raised by the changed position of the classics in the modern university and to discuss positive steps to meet these difficulties.

The form in which the question under discussion is cast may lead to some difference of opinion about its meaning, because the role of the classics has not always been the same, and the word 'previously' may apply to any earlier period in which the classics formed part of the university curriculum. For the purposes of this discussion, I shall assume that 'previously' refers to the latter part of the nineteenth century, and that what we are trying to determine is the subject best fitted to take the role played by the classics at that time in the older universities.

With this in mind, I should like to refer briefly to the conditions under which the great classicist generations were trained. In their day the universities were considerably smaller than they are now. They drew their students in the main from cultured homes, in which much of the outlook and values which we are seeking could be acquired in early life. In general the average university student was economically much more secure than is the average student of today; he was therefore not hampered by the need to devote his university life mainly to the acquisition of a qualification for employment, and so was freer to use his time to absorb a liberal education. When

considering the classicist graduate of that period we should realize that the end-product was the result of the application of the classics at the university to a student particularly well fitted to profit by that study and experience. The high esteem in which the classicist was held must fairly be ascribed to the combination of university and pre-university influences.

Today we are not discussing the abolition of the classics from the university curriculum but trying to determine the subject or subjects best fitted to assume the *predominant* role previously played by the classics. There is no suggestion that departments of classics should close their doors; indeed, there is every reason for the classics continuing to provide an excellent training, as in the past, for all who elect to undergo it. In the faculty of arts, however, there are now a number of competing disciplines which in one way or another may offer a training comparable with that of the classics, and it may be well that no one of them should be predominant and that we should consider rather ways in which for each of them present practice may possibly be improved.

The problem seems much more acute for the other faculties of the university, almost all of which are based, directly or indirectly, on science, pure, applied or technological. I wish to suggest that for these faculties the study of pure science has a strong claim to occupy part of the liberalizing role earlier taken by the classics, but it cannot complete the process without the help of the humanities.

I suggest that the natural scientists of the late nineteenth century possessed most of the qualities ascribed to their classicist brethren. Their scientific training provided a mental discipline second to none; their objectivity and reverence for truth, their scientific habit of weighing evidence, gave them the broad outlook and the well-balanced view expected from the classicist. The classicist's study of the wonderful works of past ages was balanced by the scientist's study of the equally wonderful works of nature. Indeed, we may note that at the beginning of the century some of our scientists, at least, felt no doubt that science was the complete answer to the question which we are discussing today.

Since that time, grave doubts about this have arisen, not least in the minds of the scientists themselves, as appeared in this morning's discussion. These doubts are to some extent due to the developments which have taken place and to the difficulties which have been encountered in university instruction in science, and they may be summarized as follows:

(1) The cultural background of the student is less adequate than formerly, on the average.

(2) His urgent concern with his economic position leads to early specialization and a consequent tendency to neglect cultural factors.

(3) The size of the modern university class leads to a lack of or reduction in personal contact with teachers.

(4) The scientific technological revolution in the universities has led to the multiplication of applied science groups and a change of emphasis in university teaching from the liberal outlook and broad education of the nineteenth century to the more utilitarian training of technical experts of all sorts.

(5) The professional enthusiasm of the technologists for their specialty makes them anxious to advance in it as quickly as possible, and often results in a resistance to anything in the nature of special cultural courses which may be offered.

To meet these difficulties I suggest in the first place that school education should be kept as general as possible, should include a substantial amount of the classics and humanities and should aim in every way to make good any deficiency in the cultural level and background as a whole. In certain countries of the Commonwealth this school work might be expanded by a post-matriculation year at school or a propaedeutic year at the university. The object at all times should be to produce a student who will enter the university with a certain acceptable minimum of education and having had as wide an opportunity as possible to acquire the general background common to the students of fifty years ago.

Then it is for the universities who receive these students to decide how best to deal with them. The treatment required would seem to be a broadening of the work of the technologist to include matters of more general educational value. Unfortunately from this point of view the student of applied science and technology sometimes develops a somewhat restricted and purely professional outlook. For example, even the medical student tends to forget his arts subjects when he enters the university, and to lose interest in physics and chemistry as soon as he starts anatomy, while the engineer sometimes considers even mathematics almost an unnecessary accomplishment unless he can see an immediate application for it. If it is not corrected, other specialized technologies may have a still more restricted view of their function. Therefore, if any general course of a broadening nature is to be given to technologists, it must probably be given, as already suggested, in the first year, before the professional work gets its grip.

Such courses are, of course, already given in a number of universities. For the applied scientist, at any rate, I would expect it to

be difficult to expand such courses beyond the first year, because of a crowded syllabus and intensive work on the professional subjects. A further requirement, if we are to secure the desired change of outlook on the part of technologists and scientists, is surely that of adopting a different point of view in the instruction given to them in their own specialty. At present, perhaps, utility is too much in control, and as a result we secure outstanding technical experts but not always men with the qualities provided fifty years ago by the broader training then in vogue.

I therefore suggest that a considerable change of outlook would be brought about if university teachers of technological and applied subjects could increase their emphasis on the study of the history and philosophy of science, not necessarily as a special cultural course, but as an essential part of the technical courses themselves. On the other hand, a special course on the history of the *methods* of science might be included, and could be very interesting to applied scientists and others, and at the same time broadly educational. I doubt if any cultural course added as a sort of top dressing will ever prove very effective, and therefore I feel sure that the best results will be obtained by introducing the technical knowledge itself in the broadest possible way and accompanying it by appropriate arts courses which can be related to the student's specialty.

There is another point which is worth mentioning in connexion with the training of scientists and technologists. Generally speaking, and particularly perhaps in the physical sciences, a man's whole training is devoted to the study of inanimate matter and the elimination of human and other influences from that matter. Therefore it is not altogether surprising if after such training students sometimes display some narrowness of outlook and lack of interest both in other subjects and other people. None the less it has been estimated recently that between the ages of forty and fifty some 40–50 per cent of such men cease to be active scientists and become administrators of one kind or another—works managers, company executives and so on. Consequently, if these figures are even approximately correct, about half the scientists who are trained spend about half their active lives in the management and control of men. That is a powerful additional reason for the inclusion in their university training of some study of the humanities.

The best results are likely to be attained by taking advantage of the enthusiasm of the scientist and technologist for his subject by ensuring that any new subject added to a technical course is relevant to that course, or to the work which those who follow it will undertake afterwards. The study of a modern language and its literature might be so selected that, while serving its main purpose of bringing

humanity to the scientist, it would at the same time provide him with valuable help in his science, and so give him additional interest in the study. The best solution may differ in different parts of the Commonwealth. As a South African, I am inclined to think that in the Union, where all technologists and scientists must work with a mixture of many races, the broadening of their technical course might profitably be accomplished by including some work on race relations, social anthropology or sociology. By that means the student could broaden his mind in a particularly valuable way and learn much of value about the human material with which, later, he will have to deal.

If it is important that the scientist, pure or applied, should during his university career have ample opportunity to acquire something of the classicist's outlook, it is equally necessary in this scientific age that the classicist and the arts student in general should secure some understanding of the wonders of science and some development of the scientific habit of mind, which is characterized by judgement based on facts only, and is unbiased by personal feelings or personal wishes. Such a habit of judgement, once acquired, cannot but be applied to other fields, and forms almost an essential of good citizenship. It may perhaps best be acquired by an intensive study of a limited field of science; the ideal being 'depth within limits', rather than 'shallow breadth', as Sir Henry Dale has put it. Such depth will give insight into scientific method. Furthermore, the habit of dispassionate investigation inculcated by the study of some quite small field of science can give an invaluable training in objectivity. I therefore suggest that some science should be included in the university work of arts students and directed primarily to training in the methods of science and not at all to the acquisition of any particular technique.

The CHAIRMAN: We are now to have the privilege of listening to the eminent Vice-Chancellor of the oldest University in the British Commonwealth, the University of Oxford, the ancient home and the modern stronghold of classical education.

Sir MAURICE BOWRA (*Vice-Chancellor of the University of Oxford*): Last night, listening to the eloquent speeches which we heard on this topic, I felt that I was attending a very distinguished and very elaborate funeral, a funeral in the French manner, with *pompes funèbres première classe*, and with many valedictory and obituary orations delivered over the grave. Those orations omitted one topic, which was the nature and character of the deceased; the orators preferred to speak about themselves, with becoming modesty, and,

with rather less becoming modesty, about such things as they had to offer. One felt that, although the will had not yet been read, they were expecting the old man (or the old lady) to cut up very nicely, and they themselves get a handsome share of the doings. In fact one of them, the Vice-Chancellor of Southampton, gave me the impression that he was sponsoring his own programme on television, in which he was himself playing the chief part in selling his own goods. What those own goods were I am not quite sure, and I am not quite clear that they were digestible, though obviously delightful.

We have been handed this question—and a question I suppose it is—by the ingenuity and skill of our organizer, Sir Philip Morris. I am sure that I saw it at a great many meetings before it got into print, but I never protested against it. That may be due to one of many causes—somnolence, idleness, cowardice, or just inability to speak. Whatever the reason is—and I do not remember which it was—I did not protest, and I protest now. I regard this as what, when I studied philosophy years ago, was known as a vicious question or an improper question. It is like saying 'What person is necessary to fulfil the role previously played, up to today, by your wife?'

Now, the question is a large one, and as the last speaker on the programme I had better deal with its general aspects. I entirely agree with what Dr Radhakrishnan said last night, that every country has its classics. That is entirely true. Every country that is worth being called a country has them, and many other countries have them too. More than that, you cannot but have them; you cannot get rid of them. You must have them; they are part of your life. You may put them away in a cupboard, but there they are, and they will give you that slight twinge of bad conscience which apparently we all get when we go into administration, as we heard the other day.

What is it that makes them important? I think it is quite simple. There are three characteristics which I am sure that everybody else has mentioned, and I mention them again merely because I think that they are true. The first, obviously, is that these are works of permanent value—just that. These are something done which cannot be done better, and when a thing cannot be done better in that way it cannot be done again; you can do it once, and once only. Something of that sort is something which you can live with and absorb all the time, and whenever you go back to it you find something new in it. That is the first point.

Secondly, they give us a sense of the past. I think that that is a good thing. I hear too much about the future, and such prophets as I know who have prophesied about it have been inaccurate in their forecasts; the future has a habit of catching them out by not

doing what you have told it to do. The past is more disciplined. It is noticeable that even at Durham, where the staid and austere authorities of our universities met, we broke off our discussion about what discussions we were going to have about our discussions in order to go to the Roman wall, not merely because it was a change from discussion but because we wanted to see the Roman wall, and there the past was on us. It may have been sentimental, and some of us may not have seen much of it, but the fact is that we went. Whatever we may do about the past, it lures us and calls to us and we want to know about it. The past is embodied in the classics far more vividly, I think, than in any other way. There are the great classics of building and painting about which the same is said. Classical literature lives in a way that many other documents do not, and to attempt to study the Middle Ages without reading the *Divine Comedy* seems to me silly; I would much rather know something about that than find six unpublished names of nuns in a cartulary from Nantwich.

Thirdly, we like to think that we understand the world we live in. We talk about it glibly, but of course we do not understand it at all; if we did, we might not make such a mess of it. To give a perfectly simple example, in the 1930s, when Europe had these appalling political convulsions, there rose to the top of affairs a class of person that we did not understand, a new kind of character, a pompous, ugly, bombastic crook, something outside our romantic notions of Chicago and Al Capone; and then suddenly, by accident, I read the third book of Thucydides, and found it all there and a great deal more besides which still should be read by our statesmen. I think it would have been a good thing if Chamberlain had taken that instead of his umbrella to Munich.

Now let us turn specially to the Greek and Roman classics. Quite apart from their other qualities, they illuminate the past. They give us these extraordinary moments of illumination which are the more dazzling and surprising just because of the distance from which they are seen. Plato's account of the tyrannical man would be helpful to some of our American friends in dealing with some of their more noisy public men. The simplification of human issues which we find in the classics does not make things easier for us, but it makes them clearer.

Next, they give us this tremendous sense of the past, of this Graeco-Roman world behind us, propping us, having done so much for us, not merely in literature and in law but in almost every aspect of mental exercise, including, I would underline, technology. Archimedes, who was one of the greatest pure mathematicians who ever lived, was also a technologist at a very high level.

They have above all this permanent worth, and it is that which

I should like to emphasize. Any imaginative boy or girl at school or university who likes words—and I think that that is essential; you have to like words for this particular activity—will find Greek and Latin an extraordinary revelation. It is a revelation which to my mind, I am perfectly willing to admit, is more powerful than that of any other language I know. That may seem easy enough, and you may say that there are two of them against any other one, and are they as good as English? The answer is, perhaps not; but English is our own language, and we do not have to learn it; we have that thrown in anyhow. Compared with any other linguistic training, the quality, the power, the inspiration that Greek and Latin give you is in my judgement paramount.

I know that there are other excellent arguments for a classical training. I am extremely fond of Greek metric, though I have no idea what the answers to its problems are. I believe that a good discipline is provided, but that is provided by almost every form of good education. I agree also that training in ancient history is a good study in the nature of evidence, but the police courts can give us that. But what matters is the quality of what is there, and that really is something that stays with you and keeps you going and is an abiding delight and inspiration.

What about translations? Cannot we get it by the short and easy road, and deal with it like that? We cannot. I enjoy reading translations. I think that translation is as interesting as any crossword puzzle—and about as important. When one of the speakers said last night that he had learned Latin and read Greek in translations I was appalled, because one of the great beauties about Greek is that the literature arises naturally out of the language, and the words themselves are a glory and a delight, untarnished, unspoilt, with all the freshness of the dawn of the world upon them. Compared to our rather frowsty, fuddled words it is a pleasure to enjoy them, and if you enjoy them they stay in your memory, and because they stay in your memory they affect your life.

Translations are not enough. You must have some people who know the language, and here there is a confusion which I should like to brush out of the way. Because you know Latin and Greek, it does not follow that you know nothing else. I was taught Greek by Gilbert Murray, and he is the best-read man I have ever met, talking better German than most Germans. Most European languages come to him easily and he has read greatly in them. He is an unusual man, but it can be done, and he sets an example which others should try to follow.

Secondly, I am told that Greek is no good for business. I am not very pleased about that, and the Greeks would not be very well

pleased either; they had a great respect for business—and still have. I have formed the view—this may be a hallucination—that boys trained in the classics have done rather well in business. They have become directors of our great banks and done extremely well in industry and commerce. You may say that that is despite their classical education, but it has given them a solid basis of humanity and well-trained intelligence, and I should have thought that that did the trick.

Incidentally, of course, training in the classics is invaluable for those people who have to learn outlandish languages in a hurry. That may happen again. It happened in 1941. When we had to find people to learn Japanese and Chinese in a hurry we turned to the classical scholars, and they learned these languages at enormous speed and extremely well. They thought nothing of Japanese, which has no grammar and no abstracts, but they got to know it very well. Chinese they thought a more agreeable and scholarly affair.

There is another point, and here I think the teachers are much to blame. In England, we expect most people who come to universities to read the classics to know the whole subject before they arrive and to be extremely good at it and have nothing left to learn except a few changes of accents and so on. That is rather a conceited approach, I think, and it has not done us very much good. It has the result that many clever boys coming from schools where the classics are well taught sometimes refuse to go on with them, and it discourages people who would like to know the classics from starting on them. There is no difficulty about starting on them at university. I have known it done at two places—in Oxford, England, and Cambridge, Massachusetts. At Harvard, which is the only American university I know at all well, the boys and girls start Greek, and often Latin, and in two years they come to know a good deal about it and are able to read great literature. It can be done, and I see no reason why it should not be done; if you can start a person on Hebrew, Russian or Italian at the university, why not Latin and Greek? They are not that amount more difficult. I mean this seriously. We have to get rid of the snobbish view that everybody who wants to read the classics should be a Chancellor's prize-winner.

The old predominance was plainly wrong. When Lord Rosebery complained that the trouble about the classics was that after learning Latin and Greek for twelve years a boy did not know a word of either, he put his finger on the point. That monopoly was a great disaster. But when you destroy a monopoly you need not destroy the whole thing. Oxford has paid dearly for its monopolistic tendencies in the past. The present Prime Minister of this country said to me in 1949 'When I was a young man I wanted to go to Oxford.

I wanted to read history and be told what books to read. But there was a fatal obstacle; compulsory Greek raised a forbidding finger and said "Thou shalt not".' That was in the days of monopoly. We have destroyed that, and rightly so.

All the same, I feel that there is a strong place left for the intelligent study of the classics, not merely at the highest level but at the level of those who are willing to learn. I do not think that we can do without them. I think that they are absolutely necessary to any study of literature. I do not say that all teachers of modern languages should know them, but all of them should have somebody there who does know them and whom they can consult, instead of copying it out of books and getting it wrong. To say that you can do without them is to say nothing at all, because in the last resort there is nothing that you cannot do without, and the first things you do without are the things you like most, as we know in war.

Finally, I feel that there is no real substitute for them. They may disappear, in which case I think that we shall be much the poorer. I think that young people who like imaginative ideas and who like words and all that words stand for in human experience will miss them. If they tend to disappear, it will be over a long period, and they will eventually have to be revived, so that I should like the artificial respiration, if it is needed, to be brought into play now, before there is really any body for the funeral.

DISCUSSION

Professor H. C. BALDRY (*Cape Town*): I am Professor of Classics in the University of Cape Town. I know that I shall have your sympathy in the quite impossible task of following the three most excellent addresses which we have just heard, and in particular in following Sir Maurice Bowra; but, since someone must provide the anticlimax, I want to say a very brief word about how this question strikes one who was originally trained in the classics and who went through the classical mill in this University, and has since had some years of experience of teaching the classics in South Africa.

Looking back on my classical training at Cambridge, I realize that, whatever its shortcomings, it had at any rate one great merit: it had both depth and breadth. It did, I think, combine in one single unity both a discipline—I mean, of course, the arduous business of becoming a proficient scholar in Latin and Greek—and a wider study of all the riches of classical literature and thought, a study which could give one an approach to the whole of experience.

What has happened to the classics and to classical education in South Africa, and I suspect in a number of other parts of the world, is not so much that it has shrunk but that it has disintegrated, that it has broken up into parts of the previous whole. To take my own University as an example, we have a great many students who learn Latin at various levels, and I think that for them it does retain some of the value which it has always had as a discipline. We have also a great many students who take what we call by the rather unsatisfactory name 'Classical Culture'. I think that perhaps 'Classics without Tears' would be a better title. It is the teaching of classical literature, and particularly Greek literature, through translations, to which Mr Wilkinson referred yesterday. In spite of what Sir Maurice Bowra has just said about it, I think that it has a certain value as giving many of our students a classical background which they would otherwise lack, but I fully agree with him that it is very difficult to turn it into a genuine discipline.

For the great majority, neither of those forms of study, neither their Latin nor their classical culture, can be called a classical education. It is true of Latin for most of our students, and for classical culture for all who take it, that this is auxiliary to some other study—to law or to English literature, for example—and the number of those who make the classics their central study, those who do both Greek and Latin and study ancient literature and history and thought, is, in South Africa at any rate, lamentably small and does not seem likely to increase.

For us in South Africa, therefore, and I think for a good many other people elsewhere in the Commonwealth, this is a very real question. Classical education in the full sense has to a very large extent disappeared, and it is a real question what subject should take the place that classical education has occupied in the past and still occupies to some extent in Britain, at any rate, today.

I come now to the positive point which I want to make. It follows from what I have been arguing that any subject which claims to replace the classics must also have both depth and breadth. It must also combine within one integrated unit a real discipline and a wide field of study. I have no time to go into the rival claims. Personally—and here I agree not only with Sir Maurice Bowra but also, I suspect, with almost all who have spoken—I do not believe that there is a subject which really fills the bill. The partial disappearance of classical education in the full sense leaves a gap. It leaves us without a lot of those things which Sir Maurice Bowra has so brilliantly described, and we are the poorer as a result.

All the same, I do not think that this discussion is altogether a wild goose chase; like some other speakers, I believe that it points to a positive conclusion, and that conclusion is concerned not with any

one subject but with our methods of university teaching. If we are to carry over into our modern studies the best traditions of the classical education of the past, then I think that we must try, in our teaching of any subject, to give that subject both depth and breadth, to treat it as a discipline—the more arduous the better, I think—and also to encourage our students to look at it in the widest possible way.

Mr K. S. VAIDYA (*Osmania*): The subject under discussion is 'What subject or subjects today are best fitted to fulfil the role played previously in the university curriculum by the classics?' The point is, why should we have the classics? I think we realize that everything is not going on well, and we think that if we were to introduce the classics in one form or another there may be some change for the better in the world. That is the reason why this subject has been placed before the Congress.

Now we have to find out what it is that we want. It is realized by all countries that the crying need of the day is peace and happiness. No country wants war. The world has been torn and afflicted by two world wars, and the memory of the destruction due to war and to poverty and disease following in its wake is quite green in the minds of the peoples of the world. Today there is a great fear of a third world war, and its possibility cannot be ruled out. The politicians of the world are saying that they want peace, but so far they have not succeeded in restoring it. Attempts have been made for the last thirty-five years to put an end to war, but war is always coming nearer.

The question is, why are the politicians not successful in their endeavours? Peace treaties are made, but we find that peace treaties pave the way for another war. Why? Because while the countries say that they do not want war they are preparing at the same time for another war, so how is it possible, therefore, that there should be no war?

The fact is that if we want to exclude the possibility of war we have to reconstruct the world on new principles. All countries should follow the principles of truth and non-violence preached by Mahatma Gandhi. We have to change the whole attitude of man, and new values of life should be adopted. If peace treaties are enforced upon another country by violence, peace cannot be established. Violent methods can never have good results. Politicians even today think that they can bring about the desired results by violence, but it must be remembered that bitter seeds cannot produce sweet fruits.

If a man wants his family to be happy, he must keep all the members of the family happy. If a single member of the family is unhappy, the family can never be happy. Similarly, if a country is to be happy all the families in the country must be happy. It is

equally true that if the world is to be happy all the countries should be happy. We have to change our ideas about nationalism, and the policy of putting the interests of our country above that of others, without caring about the well-being of the others, will never restore peace. The history of the last few years has proved the truth of this up to the hilt. We must turn from nationalism, towards internationalism and look to the welfare of all countries. We should not try to judge other countries by our standards, but should try to understand them. In our schools we have discarded the policy of punishment to improve our students; how, then, can countries be improved by declaring war against them? If the principle has been discarded in our schools, how can we adopt it when citizens or countries are concerned?

We must bear in mind that there is enough in this world to satisfy the needs of everyone, though not his greeds. We should therefore follow this principle in politics. My suggestion is, therefore, that we should follow the philosophy of Mahatma Gandhi and the ways of life preached by him. Truth and non-violence alone can bring justice and fair play into the dealings of individuals and nations. According to Mahatma Gandhi, every individual should take the vow of truth and no deception should be practised, even for the good of the country. He insisted upon good, honest, truthful and non-violent methods to achieve good ideals. He said that tyranny should be opposed, but not the tyrant. If the world is rebuilt upon these principles, quarrels among individuals would cease, wars amongst countries could be ruled out, and universal peace could be restored.

A Gandhian seminar was held in Delhi in January last under the chairmanship of Lord Boyd Orr, which was attended by thinkers of several countries. They came to the conclusion that peace and happiness can be restored in this world by following the principles of Mahatma Gandhi, and that there is no alternative. Many of them said at that meeting that they would educate the people of their countries on these lines when they returned home. I would therefore respectfully invite the attention of the members of this Congress to the decision arrived at by those who attended that seminar.

I therefore appeal to all the members of this Congress to give serious attention to this matter. I assure them that what the politicians have failed to achieve the teachers can do within a period of fifteen years. The students in the high schools and colleges today are the citizens of tomorrow. When they come out of the portals of the university they will decide the future of the country. Democracy has dawned, and the people are the rulers of the country. If all the citizens of all countries decide not to have war, what power in the world can force war upon us? The students of today are the voters of

tomorrow, and they will be entitled to decide the future policy of their country. If these students are imbued with the philosophy of truth and non-violence, how can there be any war? This will be possible, however, only when the teachers take their courage in both hands and include the philosophy of truth and non-violence and the Gandhian way of life in the curricula of secondary and higher education. They will then be in a position to restore peace and happiness in this world within a period of less than fifteen years, provided it is done seriously, honestly and truthfully.

Professor A. Boyce Gibson (*Melbourne*): I was trained as a student of the classics and I am a Greats man, so that my prejudices cast their shadows before them. One question which appears not to have been fully raised by previous speakers is related to the words 'public life'. I would emphasize that point, because if I were arguing in general terms on the relative virtues of a classical or a scientific education I would say that it was fifty-fifty so far as manners, morals and intellectual toughness and delicacy were concerned, but when it comes to preparation for public life I do not think that it is fifty-fifty; I think that classical education 'has an edge' on scientific education, for the reason that a classical education tries to consider a civilization as a whole, whereas it is the professional business of scientists—they have to do it, and all honour to them—to know more and more about less and less.

I agree, of course, that in many parts of the world, including Australia, the study of the classics is a specialist business, and I do not believe that it can be anything else. I hope that there will be as many specialists of this kind as possible, but we shall certainly have to consider alternatives. At the same time, together with many of the previous speakers I do not believe that there are adequate alternatives. We shall have to look for a good second best. I should like to encourage the classical teachers of Great Britain, who have a far stronger position to defend, to keep on defending it with all their might. They can at least do what we cannot do.

In defending the classics I defend not merely the study of language but the correlated study of history and literature which has formed part of a classical education both at Oxford for Greats and at Cambridge through the second part of the Tripos. I do not believe that a mere study of language and literature will do what is wanted. It is because the study of the classics in Oxford and Cambridge has not been merely that that I am prepared to defend it as I do. It is classics as involving history, literature and philosophy which we are defending as a preparation for public life.

What does a public man want? First, a sensitiveness to particular

cases. He wants that very much indeed. Secondly, a comprehensiveness of intellectual review, and thirdly a sense of the relativeness of his own and human affairs. To the first the introduction is literature, to the second it is history, and to the third it is philosophy. The three taken together must be the vehicle of our culture. The pursuit of these objectives through the study of the classics is a very great advantage.

In the first place, as Dean Fieldhouse reminded us, it confronts us with a completely different sort of civilization. The worst thing that we can do is to take our own civilization for granted, and no one who studies classical civilization can do that. I agree that we can do a great deal in this way by studying Chinese civilization or Russian civilization, something that is really and properly distant from ourselves, but classical civilization is on the whole easier to study. Latin and Greek are no more difficult than Russian and a good deal easier than Chinese.

The second and very great advantage of the study of the classics is that they are dead. Dead languages are often the subject of abuse; people say 'Why study dead languages?' The reason is that they are dead, and I want to emphasize this very strongly. Unless a civilization is dead, you do not really understand it. As Sir Maurice Bowra has reminded us, we cannot really understand the future; we can make a lot of interesting guesses, more or less elaborate and more or less misguided; but where a civilization can be unfolded in its whole history before us, that is another matter. I think that classical scholars have sometimes made a mistake in concentrating, perhaps for language reasons, on the prose of Cicero rather than on the taxation edicts of Diocletian or the rise of the Christian Church or the writings of St Augustine. It would have been better for all concerned if the pathology of a civilization had been more openly displayed. If, for example, the taxation system of Diocletian had been understood, we should at least have walked into the Welfare State with our eyes open. It is precisely because one can observe the morbid phenomena of a civilization which is dead, and the cause of death, that these histories are so instructive.

No practical alternative is so properly dead and therefore so instructive to the pathologist of society. Medieval civilization is not quite so dead. It is no good trying to study medicine without showing how people die, yet that is how it is sometimes proposed to educate those who are to be the doctors of society.

I suggest, therefore, that the general aims which I have outlined for public life can best be achieved through the study of the classics, but I realize that there are difficulties under modern conditions. I might even, under protest, dispense with some of the language basis. What I would not dispense with is what Oxford and Cambridge in

their classical training have always emphasized, the correlation of literature, history and philosophy as part of a single discipline. I should want to add, under modern conditions, an adequate knowledge of what science can and cannot do, but that is another story. A General does not have to have been intimately associated with artillery in order to understand what artillery can do. Similarly, I do not think that a man in charge of public weal must have been trained as a scientist to understand what science can do. It would be a help if he had been, and he ought to know, directly or indirectly, the limits of his tools; but literature, history and philosophy are the right bases of any training for public life, and the classical training has done the job better than all the others.

Professor N. BENTWICH (*Jerusalem*): The Hebrew University of Jerusalem is not a university of the Commonwealth any more, but by the gracious invitation of the Association I am able to attend this Congress. As regards the University of Jerusalem, the answer to the question of what might be substituted for the classics as a basis of education for public life is simple: it is Hebrew. The Vice-Chancellor of Oxford said that every country which is really a country at all has classics of its own, and Israel has Hebrew.

When I was an undergraduate at Cambridge all my time was given to the classics. It struck me as strange that at that time there was a Regius Professor of Hebrew and two Professors of Arabic but no Professor of English, as if English were not a classical tongue. The Vice-Chancellor said 'Of course, we all know English without learning it', but I wonder whether we did appreciate the beauties of English and got the values out of English that we might. The only person who lectured on English in my time, I think, was an American visiting lecturer. After I had ceased to be an undergraduate, however, there was appointed here at Cambridge the first Professor of English Literature, and he was one of my classical tutors at Trinity College.

At Jerusalem, although Hebrew is the principal substitute for the classics as the basis, we have a classical department and many of the students take Greek and Latin. We also recognize English literature as one of the subjects which can be taken as the basis for the faculty of humanities. I feel that any language which has a classical literature can, in the country where it is the native language, be substituted for Greek and Latin as the basis for public life.

I agree with Dr Alty that for those who take classics it would be sound and desirable that there should be some teaching of the elements of science. To know nothing about the basic ideas of the world in which we live today is a handicap, just as it may be a handicap not to know about the greatest periods of the world which has passed.

Mr M. TIMUR (*Peshawar*): I think that in the minds of most of the speakers there has been another question, in addition to the one which has been put to the meeting, and that is, so far as I have been able to understand it, the question of what is wrong with a purely scientific education. The answer, in the view of many people, is that there is a deficiency which used to be supplied by a classical education, and so the question now is, what can take the place of a classical education? In one way the answer is very simple. The classical education consisted of education in ancient history, literature, philosophy and religion. If one could get a liberal education by studying the classics, then one could also get it by studying modern history, philosophy, religion and literature.

I approach this problem from this point of view. What is wrong with a purely scientific education? Let me illustrate that. I have an old colleague, about the same age as myself, who is now holding an administrative job. His education has been mainly in science and mathematics. When he was appointed, he came to me and said, 'I am going to act like a machine.' He did not say 'work like a machine', by which he would mean work hard, but 'act like a machine'. The second thing he said to me was 'I do not know why I am always right in my judgements, while other people often make mistakes.' In my opinion, these two statements point out what is wrong in a purely scientific education. When he said that he was going to act like a machine, he probably meant that he was going to act according to certain rules, without any elasticity, without listening to other people; and he really did act like a machine and displeased people unnecessarily in his work. He was most inelastic in his methods. One danger of a purely scientific education, therefore, is that a man may act like a machine without trying to understand other people, and he may be guided by certain aims which he has not examined critically and about which he has made no careful moral judgement. He may follow his desire to achieve something and may not care what other people think of it. That is one danger of a purely scientific education.

The other danger is that he may not only ignore other people's points of view but also may not recognize that other people have a point of view. In my opinion, these are the two great dangers of a purely scientific education.

How are we to make good this defect? I consider that the best method is to act on the old Greek saying, 'Know thyself'. The scientist must know something about human nature. The best teaching about human nature in a concrete way is to be found in literature. It may be English literature or Greek literature or any literature. In a novel or a drama or a story we can find the complete

facts about human nature, and then when we meet other human beings we become elastic in our behaviour towards them. We try to understand their point of view. Secondly, the scientist must know something about moral differences, the difference between right and wrong. In my opinion, therefore, the defects of a purely scientific education can be made good by the study of history, ethics, religion and literature.

Sir SYDNEY CAINE (*Malaya*): I shall begin with an apology of a general character, because I think that I am going to disagree with most of those who have already spoken, and I do not want to waste time by being polite to them individually.

We have heard a great deal about the values of a classical education, which has been put forward as a great instrument for training the mind and forming the character, for enabling one to study world history and cosmogony, a great instrument for giving an understanding of social significance. I confess that, in spite of all the eloquence that we have heard on these subjects, I remain completely unconvinced that in any of these fields a classical education is the only or the best mechanism for achieving those particular purposes.

In the field of the training of the intelligence, I do not know how many times I have heard it said that a classical education has great virtues beyond those of any other system of education, but I have never heard presented anything that a scientist would regard as evidence in support of that assertion, and my personal experience in thirty years of administration of various kinds, in which I have had to deal principally with people who claimed some kind of university education, is that I have never yet found the criterion by which I can decide whether the mind with which I am dealing is that of a classically educated man or of a man educated in some other fashion.

Equally, even when somewhat dazzled by the eloquence of Sir Maurice Bowra, I cannot take very seriously the suggestion that one is taken a long distance towards an understanding of world history by the study of Caesar's *Commentaries*, or that one gets a good introduction to modern astronomy by reading Aristotle.

I am driven, therefore, to wonder whether there was not something else in the old kind of classical education which speakers hitherto have not been prepared to put forward, and I have come to the conclusion that the great value of a classical education was that it had no value, that it was an education which was not designed to teach you something useful, that it was not even designed to teach you to be a politician, a statesman or anything of that kind. It was a study which was undertaken because people wanted to study and were pursuing knowledge for its own sake. I am surprised that that point has not

been clearly made before in these discussions, because, as I see it, that is, after all, one of the main purposes of a university: to promote the study of knowledge for its own sake, without any idea of training or social significance or anything of that sort.

It is true that the study of abstract, useless knowledge can sometimes be very dangerous. If certain people had not wanted to study certain rather queer and useless electrical phenomena in the late nineteenth century, we should not now be faced with what some regard as the appalling prospect in this country of sponsored television, and there are many other instances which could be quoted.

It seems to me, therefore, that what is needed to replace the classics is something which continues that tradition of useless study, of study for its own sake. That, obviously, must be something different in every country, and I think it must be something different for every faculty and department. As has already been said, it is important not only for the scientist to learn and to study something other than science but for the student of the humanities to study something other than the humanities, and above all to have before him the idea of the study of knowledge *as* knowledge, and not because it is going to be in any way useful.

Dr H. F. HUMPHREYS (*Birmingham*): The hour is late, and the only reason why I put my name down to speak on this subject was that I did, many years ago, receive a classical education and even acquired a classical scholarship, and then switched to medicine, which is a discipline which might be said to be half-way between science and art; it has some science, and is also in a sense an art, while both science and art are heavily diluted with a great deal of empiricism.

One point which I want to make is that the function of a university is not only, as has been assumed almost throughout this discussion, to teach people how to think, but also to teach people how to feel. The process of teaching people how to think is very clear; you must teach them to acquire habits of mental industry, so that thinking becomes in time a source of fun and not a source of fatigue as it is to the majority of people. You must teach them methods of thinking—induction, deduction and how to weigh evidence.

I am assured by the very numerous professors over whom I am supposed to preside that these results can be obtained not only by the classics in the more limited sense in which Sir Maurice Bowra has used the term—dead languages—but by pure science, by applied science, by history, and even by the more empirical social sciences and medicine. I am not in a position to contradict them, and all the arguments of these professors sound equally convincing.

When it comes to teaching students how to feel, however, it is a different story. A scientific education does not teach people how to feel. They may learn to feel in spite of it, but not because of it. A purely scientific education can, and sometimes does, induce a state of mind in which things which are incapable of proof or disproof are dismissed as not worth bothering about. I have met scientific people who have been of that frame of mind. The classics has clearly a great advantage over that sort of thing if it is taught properly, but there are classical teachers—I even encountered some in my school days—who think that the business of a classical teacher is simply to be a grammarian, 'to solve the problem of the enclitic δέ' and that sort of thing, and that does not teach people how to feel, although, as I say, teaching people how to feel is part of a university education. I do not believe that it can be done by stuffing more facts into the already greatly overburdened brains of the undergraduates of today. We do not want to cram them with any more facts, whether facts about the classics or literature or anything else. The real duty of universities to their students should be to stimulate their growth, especially the growth of those faculties that are not nourished by the particular discipline in which they are being trained. This entails an introduction to the arts, and to extract satisfaction from the arts you need a good appetite and a good palate. Neither is obtained automatically by passing examinations even with first-class honours.

The CHAIRMAN: I regret to say that the time has come to close the meeting, but before doing so I should like to express my regret to those intending speakers who were good enough to send in their names but whom I could not call upon to speak. Secondly, I am sure that you would like me to express your sincere thanks to all the speakers who have taken part in the discussion this afternoon, particularly to the opening speakers, for the very valuable contributions they have made. The discussion has been maintained at a very high level, and we are grateful to all the speakers who have taken part.

Before you disperse I want to say a word about the staff of the Association, because I do not think I shall have a chance of doing so tomorrow. I should like to say how very much we all appreciate the hard work which the staff of this Association have put in to make this occasion a great success. The entire work has been carried on under the direction and supervision of the Secretary, Dr Foster. There are others who remain unnamed but who have done their best to make this Congress a success. Day after day and week after week they have laboured steadily, quietly and unostentatiously, and all of them deserve our thanks, individually and collectively. (*Applause.*)

Friday, 17 July

ADMISSION AND SELECTION OF STUDENTS

FINAL PROCEEDINGS

SESSION ON ADMISSION AND SELECTION OF STUDENTS

Chairman: SIR A. L. MUDALIAR
Vice-Chancellor of the University of Madras and Chairman of the Standing Committee of the Inter-University Board of India

Opening Speakers:

PROFESSOR J. MCKINNELL (*Professor of Pure Mathematics, University of Natal*)

MR P. M. SHERLOCK (*Vice-Principal of the University College of the West Indies*)

DR J. WILLIAMS (*Principal of Victoria University College, University of New Zealand*)

PROFESSOR J. Z. YOUNG (*Professor of Anatomy, University of London*)

SIR IVOR JENNINGS (*Vice-Chancellor of the University of Ceylon*)

SUMMARIES OF ADDRESSES

The following summaries provided by the opening speakers were printed in the Congress programme:

(*a*) PROFESSOR J. McKINNELL

My intention is to comment not so much on the problem of admission and selection generally as on one aspect of it to which attention has recently been given in the University of Natal. The university has been able, largely as a result of duplication of facilities in its two 'seats', to accept all applicants for admission who had reached the necessary qualifying standard. With unrestricted admission a substantial casualty rate is to be expected in the first year, but some student-sponsoring bodies, and also some people within the university, have maintained that the rate, particularly in certain faculties, e.g. agriculture, is disturbingly high. Some five years ago, the university decided to appoint a Student Adviser, an experienced psychologist

one of whose chief tasks was to be the study of the misfit, the early detection, if possible, of the certain failure, and the direction or redirection of the possible success. Over the past five years the Adviser has collected data on all entrants with regard to high school achievement, matriculation examination results, intelligence and the psychological tests, interest inventories, etc., and has correlated these as predictors of university success. The study is a long-term one but its immediate application to the Faculty of Agriculture is interesting. It reveals that the intelligence of the agriculture entrant is not noticeably lower than that of the general run of entrant. On the other hand, the matriculation results and high school achievement of agriculture entrants compare very unfavourably with those of other groups. Their school and matriculation science performance compares especially unfavourably with that of pure science entrants. From the application of the Kuder Preference Inventory definite faculty patterns or profiles emerged, the faculty pattern persisting year after year and differing significantly from the patterns of other faculties. In the case of agriculture, it was further found that the profile for the group did not change very significantly when the failures were subtracted. Apparently the career interest was present, but the academic ability was lacking.

The preference profiles have also been found useful as an aid in detecting the student with adequate school record who, for one reason or another, has gone into the wrong faculty, a case this time of the ability, as indicated by pre-university achievement, being present but not the interest.

The studies initiated by the Adviser are still in their early stages but the university believes that it took a step in the right direction when it decided to appoint a full-time officer whose chief preoccupation they should be. It hopes thereby to improve its system of student counselling, and should it at any time find it necessary or desirable to restrict admission it will have much useful material already to hand.

(*b*) MR P. M. SHERLOCK

The problem is to find suitable candidates for admission as scholars or as paying students to the University College of the West Indies.

By far the largest number of applicants have come from the British West Indian territories and the methods of selection have been designed for this group of applicants.

The methods of selection should be as flexible and comprehensive as possible because of the wide dispersal of the territories and the variations in the quality and quantity of secondary education.

The University College is situated in Jamaica, which has one half of the population of the British West Indies, and it is supported by

the seven British territories in the Caribbean; these are strung out over 2000 miles, so that one difficulty in dealing with the selection and admission of students is that of distance.

The seven territories are independent of each other and their resources vary greatly. In Jamaica, Trinidad, British Guiana and Barbados the standard of secondary education is good and students in sixth forms work for the Higher School Certificate Examination or for the General Certificate of Education at the advanced level. In the other three territories—the Leeward Islands, the Windward Islands and British Honduras—financial resources are extremely limited. In the Windward and Leeward Islands there are seven main islands with a total population of about 270,000. Each island makes what provision it can for secondary education but there is comparatively little sixth-form work. Teaching in the natural sciences is limited, and there is an acute shortage of books and of laboratories.

Since students admitted to the U.C.W.I. work for the degrees of the University of London all candidates for admission must satisfy the requirements for entrance to the University of London. In addition, candidates are required:

(*a*) to submit details of their school record;

(*b*) to sit for an entrance examination which is designed to test aptitude and ability. Applicants for scholarships and exhibitions are required to take special scholarship papers;

(*c*) to attend for an interview with members of the staff of the University College. This means that each year three or four members of the staff visit the territories of the British Caribbean to interview applicants.

The experience of the past five years has shown the value of the entrance test and interview especially in assessing the ability of applicants in one of the smaller territories whose examination records may be less impressive than the records of candidates from some of the larger territories with better educational facilities, but whose intelligence is better.

There is the further problem of a fairly large number of applicants of good ability who cannot enter the University College without grants or scholarships. This is one of the most serious problems in a community which is poor and which therefore cannot afford to waste its human resources.

(*c*) DR J. WILLIAMS

The problem of admission and selection of students is one dependent on the facts and circumstances of the particular community in which it falls to be solved. With the notable exception of Thomas, Beeby

and Oram, *Entrance to the University*, there is very little precise relevant information available in New Zealand.

Admission and selection of students is chiefly of economic importance. There is no necessary connexion between a university's admission standards and the standard of its honours degrees and research. The question turns very much on the needs of the particular community. Often it may be better to have a less highly trained graduate than no graduate at all. Exclusion of students solely by reason of the university's lack of resources must almost always be a community misfortune.

In New Zealand admission to the university depended for many years before 1944 on the candidate's passing the entrance examination. The range of subjects for this examination and the grouping and selection of them by the candidate were somewhat restricted. As time went by the examination became, in effect, a general leaving examination for pupils of secondary schools whether they intended to go to the university or not. The examination was not a good test of likely success at the university. It was thought that the examination was cramping the schools, and in 1944 the 'Accrediting System' was introduced. The ultimate basis of this was an examination but in a wider range of subjects with a much freer choice open to the candidate. The new system has not lowered the general standard of entry into the university but it does tend to have effects in relation to particular subjects.

The new system is no more effective as a predictive test of success at the university than was the old. The two facts which are most significant from this standpoint are the candidate's having stayed at school for a year after acquiring the entrance qualification and his being a full-time student at the university. Practically the only example of selective entry in New Zealand is entry into the medical school. Selection in this case is brought about by the lack of accommodation; and its effects are not in all respects satisfactory.

The great backlog of university building in New Zealand, unless the government recognizes the needs and provides funds to relieve it, will shortly impose on the universities the need to exclude students. This will be, in a rapidly expanding community, a grave misfortune.

The proportion of graduates required in a developing community tends to be higher than the proportion required in a community which has attained maturity. Hence the proportion of students and graduates in New Zealand is higher than it is in the United Kingdom.

(*d*) PROFESSOR J. Z. YOUNG

The problem of the selection of students for university training resides in the fact that we are ignorant of the extent to which a person is capable of developing intellectual powers at a relatively late age. It is often assumed that the individual offering himself for admission has certain capacities which can be rated on a fixed scale. The evidence for this assumption is questionable. It is doubtful how far we are justified in condemning individuals as sub-normal at any stage of life. Investigations of the efficiency of methods of selection have been made at University College, London, by comparing performance in the university with ratings by various methods on admission. Intelligence tests and essays have proved to have very low predictive value. Reports from previous teachers, collected in a standard form, are more efficient, and are now used for assessment of suitability for admission, together with separate interviews by individual members of the staff, meeting later to compare their assessments.

The problem of selection of medical students is, of course, complicated by the need to find men and women with a real vocation for this work, and of such character as is likely to make them into good doctors, although a high level of intellectual capacity is necessary, but not sufficient, for this profession.

(*e*) SIR IVOR JENNINGS

1. Selection is inevitable unless either:

   (1) The demand for university education is small because

      (*a*) other routes lead to more attractive careers;

      (*b*) the cost of maintenance and fees keep out the mass of the population; or

   (2) The country is rich enough to provide a complete educational ladder for every student who has the necessary ambition and native intelligence.

Even if there were a country in which (2) operated, individual institutions would be compelled to select.

2. In a country like Ceylon, which (*a*) has a low national income and cannot afford to spend much on university education; (*b*) nevertheless desires that university education shall be maintained at a high (and therefore expensive) level; and (*c*) has a moderately good educational ladder, selection is essential.

3. There is no clear *principle of selection* because 'suitable for university education' is too vague a phrase for practical use. Presumably the test ought to be the ability of the student to enter and

make a success of his chosen career. Hence professional faculties have an easier task than arts and science. It seems undesirable to make a student choose his career at the age of eighteen but (except where he can afford to take an arts or science course first) professional faculties have to do it because of shortage of accommodation. Arts and science ought to honour a choice, but not to insist upon it. What about post-university transfers? Since arts and science lead to a wide variety of careers there must be a mixture, which is equally desirable for educational reasons.

4. The *methods* of selection are:

(1) *Examination.* In most universities something is now required in addition to the 16 plus Matriculation or School Certificate. This operates in favour of (*a*) the wealthier students; (*b*) the larger (and usually urban) schools; (*c*) the schools with specialist teachers. It also encourages early specialization and tends to keep out students who will do well in careers requiring common sense, adaptability and *savoir faire* rather than specialized knowledge.

(2) *Standardized tests.* Their production is a long and complicated process. Information about experiments would be welcome.

(3) *Personal interviews.* In arts and science interviews by heads of departments seem to lead to excessive emphasis on specialist ability. Interviews by boards lead to somewhat haphazard choice. If the boards are asked to give marks, their mark curves are almost invariably different.

(4) *Reports from schools.* They can be valuable or valueless, according to school. A standardized form seems to be necessary.

OPENING ADDRESSES

The CHAIRMAN (Sir A. L. MUDALIAR): This being the last session of the Congress, I would crave your indulgence for a few minutes while I offer some preliminary remarks on the subject. The Congress has dealt with very many subjects which have naturally attracted wide attention and have interested almost all those present here. We began by discussing on the first day the question of government and universities, and we went on to discuss subjects such as academic mobility and administrative duties. The last two subjects which we have discussed, the place of technological education in

universities and the place of the classics, have certainly been of interest to us all and have also attracted some attention in the Press.

Perhaps today's subject may come as an anticlimax for many of you, but those responsible for administrative duties, and particularly the vice-chancellors of universities and the principals of colleges, will find in this discussion much to listen to and to profit by. About five years ago I visited a great Canadian University, McGill, and I naturally got into touch with the Dean of the Medical School there. It was in the month of August, and he had a great pile of papers on his desk. He said: 'This is my headache; I have to select 115 out of 1750 for the Medical School, and I do not know exactly how I can do it.' That brings to our minds the greatness of the problem in all countries. There may be different shades of it, but we shall all agree that the selection of students for the university is at present a problem of such magnitude that a scientific and systematic discussion of the subject will not be unprofitable.

Selection of students for entrance to the university is not the only problem; there is also the problem of putting the students properly into the different faculties and suggesting what will be best for them, and this may be an even greater problem. In my country there has been a landslide in favour of the science subjects, and great numbers of students are anxious to take scientific studies, perhaps because of the belief that science has come to play such a large part in the life of the nation.

The old impression that examination results can be taken seriously into consideration has proved rather disastrous, and we all know cases where this has not served as a useful test. I need hardly quote here the example of William Thomson, later Lord Kelvin. When he sat for his final honours examination one examiner said 'We are not good enough to sharpen his pens', but when the results appeared it was found that he did not take the first place. Another example is one which it makes me feel guilty to quote. Srinivasa Ramanujan, the greatest mathematical prodigy of his age, was not accepted by Madras University—let me confess that I am heartily ashamed of that fact—and yet proved to be the greatest mathematician of his age.

I once thought that these were stray instances, and every rule has exceptions; but a few years ago I had the opportunity to read a pamphlet edited by the late Sir Philip Hartog, *An Examination of Examinations*, and that cured me, as an examiner, of having too much faith in the results of the examination system. Taking two groups of experienced examiners, it was found that the person placed first by one group secured the thirteenth or fifteenth place in the other group. We may well feel, therefore, that in this slaughter of the innocents we as examiners have had a conspicuous part to play.

Apart from this, there are the difficulties which arise in the professional sciences. I happen to be a member of the medical profession. The other day we heard about the engineering profession, and the qualifications of the students who enter that profession. I hope that my friends in the legal profession will not take it amiss when I say that it is the only profession in my country where entrance is free and easy to all and sundry. I do not think that I will try to draw any conclusions from that fact. Perhaps it is the anxiety that every man should know something of the law of the land and the laws of the world which leads to such large numbers of students going into our law classes. In the professions a much greater amount of care and judgement is necessary in deciding what are the standards and to what extent we should attach importance to intelligence tests and aptitude tests, how far they are scientific and to what extent they can be improved.

These are all subjects on which I dare say our speakers today will touch, but I should like to mention another aspect of the matter. We are thinking in terms of the universities, but let us turn to the student and think in terms of the student. What is the attitude of the student who does not secure a place in a professional body or a university? Are we justified in giving him that 'inferiority complex medal', which may not altogether be deserved? Are we so sure that we can separate the sheep from the goats, and that there are not some goats among the sheep and some sheep among the goats? For the present I shall content myself by asking the speakers to enlighten us on this subject, and I hope to profit thereby.

Professor J. McKinnell (*Professor of Pure Mathematics, University of Natal*): I was asked to take part in this discussion as one coming from a university which, until now at least, has been able to accept all applicants for admission who have reached the necessary qualifying standard. Therefore, as I have indicated in my summary, it is my intention to comment not so much on the topic of admission and selection in all its generality but rather to confine my remarks to one aspect of it which has been receiving considerable attention in my own university, the University of Natal, namely, that of the incidence of failure amongst first-year students.

First of all, however, I should like to indicate the considerations which led us in Natal to continue our practice of accepting all applicants who had reached the qualifying standard. Although our numbers increased very rapidly in the post-war years we were just able to take the strain on our laboratory facilities. Of the two faculties which might have over-strained these facilities one was located in Durban and the other in Pietermaritzburg, and in each centre we

were fortunate in having just expanded our laboratory accommodation. We are an institution of the type of Dundee-St Andrews or Durham-Newcastle, with the additional disadvantage, however, that our two centres are fifty miles apart. Again, South Africa can readily absorb all the graduates we can produce, to say nothing of the demands of the Central African territories. Thus the two factors commonly leading to selective admission were not present. We found, too, that although our numbers were increasing rapidly the level of intelligence of applicants was not falling; in fact, it has remained almost constant over a number of years.

For these reasons, and because of the difficulty of foreseeing which of the lower-class matriculants were likely to make good, and which not, we felt that it was only fair to give everyone reaching the qualifying standard at least a first chance. With this practice, one expects a substantial casualty rate in the first year, but, if we expect it, we cannot simply accept it as being in the nature of things and do nothing about it; for, as the Chairman has pointed out when dealing with a similar matter, this is not merely an academic problem; it is a real social problem, and one which calls for the fullest investigation by the University. I may add, too, that the problem does not disappear with more selective admission; it remains, though not in the same degree.

The problem has to be approached in the light of local conditions, so let me first indicate what some of these are in South Africa and in what respects they differ from the position, say, in England. The standard qualifying for admission to any South African university is the matriculation certificate or the matriculation exemption certificate of the Joint Matriculation Board of the South African universities, with, of course, the usual faculty bars. The number of entrants who go beyond this in the South African schools is negligible, so that there is no such difficulty in South Africa as that of assessing the relative merits of school certificate, higher school certificate, or scholarship candidates, or whatever the new terms are. It can be assumed that applicants come up to the South African universities at one general level of attainment. Furthermore, though most of the entrants have taken the examinations conducted by the Education Departments of the different provinces rather than the Joint Board's own examination, the conditions under which these provincial examinations are recognized by the Joint Board ensure fairly uniform standards of marking. In these two respects the position is somewhat easier in South Africa than here in England.

Traditionally, it was the practice of South African universities to admit every applicant who had reached matriculation standard, but within the past twelve years or so the numbers applying for

admission to the faculties of medicine, engineering, architecture and veterinary science, and therefore wishing to enter the first-year science courses, have far exceeded the laboratory and hospital facilities available, and it has been necessary to restrict admission. The universities concerned are Cape Town, Witwatersrand and Pretoria, the three largest of our universities. The problem of selection was an immediate one, and the yardstick adopted was that of performance in matriculation or equivalent examination. In the light of what I have just said it will, I think, be accepted that this was a not unreasonable procedure to adopt, and on the whole it has worked satisfactorily.

Meanwhile, my own University had decided to establish a full-time post which it styled that of 'Student Adviser'. It is not a very apt title, because it does not properly indicate the duties that the man was expected to perform. He was not to be what is commonly understood by an adviser of studies, but rather an adviser to faculties and Senate. One of his chief assignments was the study of the misfit, the early detection, if possible, of the certain failure, and the direction or redirection of the possible success. Immediate results were, of course, not expected, and over the past five years the Adviser has collected data on all entrants with regard to high school achievements, matriculation examination results, intelligence tests, interest inventories and so on, and has correlated these where possible with university performance.

As has been found elsewhere, the intelligence tests proved to be in themselves but poor predictors of even first-year university success. Matriculation results correlated very much better with university performance. From the interest analyses, when the results are represented diagrammatically, definite faculty patterns or profiles emerged. A faculty pattern persisted year after year and differed significantly from the patterns of other faculties, as has been found elsewhere too.

This study is intended to be a long-term one, but its immediate application to the faculty of agriculture, in which there was a comparatively high first-year casualty rate, was interesting. The Adviser was asked to direct special attention to this faculty. The results of the intelligence tests indicated that the higher rate of failure was not primarily due to deficiency in intelligence; the intelligence of the agricultural entrant was not noticeably lower than that of the general run. On the other hand, the matriculation results and high school achievement of the agricultural entrants compared unfavourably with those of other groups. The interest profiles indicated that the 'scientific' interest—unlike the 'practical-creative-handwork' type of interest—was not so pronounced as in the case of the pure science students, and—and this was one very interesting point—the interest

profile for the group of agricultural entrants did not change significantly when the failures were subtracted. The career interest or preference was manifest generally, and it seemed that the higher failure rate was due to the presence in the group of a high proportion of third-class matriculants, practically minded but without the necessary academic endowment. We suspect that something of the same kind will be found in the faculty of engineering.

In speaking of interest or preference profiles above I have been referring to the group profiles. To me, one of the most interesting applications arises from the preference profiles of individuals, which the Adviser finds particularly useful in detecting the student with an adequate school record who for one reason or another has got into the wrong faculty. His profile will differ significantly from that of the faculty, and very often closely resembles that of another faculty. In such cases the ability, as indicated by pre-university achievement, is present, but not the interest, and re-direction brings happy results. It would seem that interest profiles might be a useful adjunct to high school or matriculation results in predicting university success, or, more exactly, the faculties in which this was most likely to be achieved.

My remarks must of necessity be incomplete, because the study to which I have referred and similar ones are themselves incomplete, but we have seen enough in Natal of our Adviser's investigations to have no doubt that we were right in assessing this question of the casualty rate and similar questions as of sufficient importance to merit the full attention of an experienced investigator.

Mr P. M. SHERLOCK (*Vice-Principal of the University College of the West Indies*): If you were to take the University College of the West Indies and put it where Cambridge is, the nearest British territory, British Honduras, would be somewhere down by the Pyrenees; Trinidad would be in the direction of Bucharest, and British Guiana well over in Asia Minor. Our first problem therefore, in this matter of admission and selection is that of distance. In these widely dispersed territories there is a population of three million people, of many different races, creeds and colours. There are people with many different racial and cultural backgrounds. The University College of the West Indies, therefore, serves a multi-racial society with considerable variations in cultural and racial background.

In addition there are fairly wide variations in facilities for schooling. In the larger territories, such as Trinidad, Guiana, Barbados (which is large by reason of population, not by reason of size) and Jamaica, you will find the facilities for schooling well developed and fairly comprehensive, but in the Windward Islands, the Leeward Islands and in British Honduras, and still more in the very small territories

such as the Cayman Islands and Turks Island, the position is different and there are fairly wide variations in the facilities for schooling.

In dealing with the problem of admission and selection, therefore, we have those three important factors to bear in mind, and from the very start we felt that it was necessary to have as flexible a scheme as possible. Since we are working for the degrees of the University of London, one qualification for admission to the University College of the West Indies is the qualification for admission to the University of London, but we also employ other additional methods. We set our own entrance examination papers, not so much to test knowledge as reasoning power and aptitude. They are not intelligence tests. I confess that I am myself suspicious of gadgets and mechanical means of testing intelligence. Certainly in our circumstances, where there are considerable variations in background, it would be difficult to apply the same tests throughout, and so in the entrance papers the questions (of which there is a fairly wide choice) aim at testing not so much factual knowledge but rather the reasoning powers of the candidate.

We also use the interview. I know that recent studies in this country and in others throw some doubt on the value of the interview, but in our circumstances it has proved useful in at least two ways. Sometimes the interview shows that the candidate for admission is very uncertain about his future career, and the interview gives the opportunity for discussion of this difficulty. It also enables us to check the findings of our own entrance examination and of the school record. The interview has proved a valuable check on the other methods.

We use these three methods, then: the qualifying examination of the University of London; our own entrance examination; and the interview. The position, however, is a little more complicated than it may appear to be from what I have said, because of the people who apply to us for admission by far the larger number cannot come without help, either through full scholarships or grants, and the number of scholarships available is limited. At the moment, out of our very small total undergraduate population of 250, about 40 per cent hold scholarships and grants. This means that it is most important to select as carefully as possible not only for admission but also for the award of scholarships. There is this further fact that we must bear in mind, that the society in which we live in the West Indies is one which is in movement. Great changes are taking place. We are living through a political and an industrial revolution at the same time. During the past ten years there has been considerable advance in political responsibility and there are also the beginnings of an industrial revolution in Trinidad and in Jamaica. It is quite important for the

leadership in the community that the limited funds at our disposal for scholarships and grants shall be used with as little error as possible. In addition to the different tests for admission, therefore, we set special scholarship papers.

None of us would claim that what we have done is satisfactory. I myself would like to suggest that there are at least two other methods which we might use. First, it might be of value to obtain from schools much more detailed information about the candidates. It is possible to obtain very satisfactory academic performances based largely on the ability to repeat and memorize rather than on the ability to reason. A statement from the principal of the school helps to correct this.

I should like to suggest that the statement should contain some information about the temperament of the candidate. This is not required as a qualification for admission but as something which would guide us once the student had been admitted. I have been impressed by the difficulties of adjustment which sometimes confront students coming from our dispersed and scattered communities to a great country such as the United Kingdom. There is great difficulty in adjustment for a student from a small island to a great and crowded metropolis like London, and sometimes the stresses and strains prove too much for the student. In a certain measure the same problem arises in our own University College, where students coming from comparatively small and isolated communities may find some difficulty of adjustment even in our comparatively small University College. Some indication of the temperament and stability of the student, therefore, would be of assistance to us not so much for purposes of admission but to enable us to assist the student, particularly during the first year of his student career.

There is also the fact that tuberculosis is one of the prevalent diseases in the British Caribbean, and I think that it would be as well for us to require, as one of the conditions for entrance, an X-ray of the chest, so that if there is disease it can be dealt with.

I have tried to sketch briefly the difficulties and the problems which face us, the difficulties of distance, of variations in educational attainment and schooling. I should like to say that we are fortunate in the British Caribbean, because we live in a multi-racial society in which the people mingle together as equals, people of many different cultural backgrounds. In this community, so dispersed and so varied, the University College can be a strong unifying force. We have from the beginning resisted any attempts to give quotas to different islands and have tried to make intellectual quality the reason for admission. We have disregarded completely irrelevancies such as race and language and creed.

Dr J. WILLIAMS (*Principal of Victoria University College, University of New Zealand*): You might very reasonably ask why I should be troubling you this morning. The answer to that is quite simple; it is that Dr Foster has carried to a very high degree the art of writing gently persuasive letters to which one cannot say No. That, I think, is the only reason why I am here. Dr Foster wrote: 'The Committee thought you would have something of interest to say on this subject in the light of New Zealand experience, as it felt the Congress would be particularly interested in the difference between Universities which have a *numerus clausus* and select students to fill a limited number of places and those who take all comers who have reached the necessary qualifying standard.'

I must make my confession at the outset. What I am likely to be able to contribute to this discussion is a great deal less than you might have been entitled to expect. There are two reasons for that. The first is personal to myself. For much of my university life I have been a professor of law, and I had little need to be interested in entrance discussions during that time, for entry to any considerable extent into legal studies in New Zealand was very well protected by the inclusion at the beginning of the law course of the equivalent of about two-thirds of the B.A. degree. That being the case, my students had to go through the entrance examination and through two-thirds of the B.A. degree, and I had less concern with the entrance discussions which were prevalent in New Zealand than had my colleagues, who had not a like measure of protection. Since I have gone over to the administrative side of university work I have had perforce to be more catholic in my tastes and to listen to, try to understand, and come to some view about these discussions on entrance to the university. However, for reasons which I shall explain in a moment they have been the least important of the matters which I have had to tackle during my apprenticeship, and the truth is that such tentative views as I have formed from time to time have been for the most part mere impressions, and they are not fit to be shown in company. That is my apology.

The other reason why I cannot say as much as you might expect is that there is in fact very little precise information available on the questions which have been put forward for discussion today so far as New Zealand is concerned. To that statement, however, there is an exception. The New Zealand Council for Educational Research published in 1939 a most admirable and carefully documented study by Thomas, Beeby and Oram entitled *Entrance to the University*. That is the real bible on the matter, but for the rest there is little exact information. I suggest that in most university matters impressions are extraordinarily misleading, and what we want—and what I dare

say is available in this country—is exact figures and precise details. I think that that is the only safe basis for decision in many university matters, and particularly this one, but the fact is that we have not got it, and so what I have to say is of less value than it would otherwise be.

There is one principle which has become apparent from what the previous speakers have said, and it is a truism. It is that this problem is one which cannot be solved by reference to general principle; it turns very much, I think, on the particular circumstances and needs of the community where it falls to be solved, and on the time when it falls to be solved. It is one of those questions to which the answer may be, and probably will be, different in different communities, and even different at different times in the same community. That is a truism, and I apologize for it.

I want to say one thing which I hope you will not think too heretical, and that is that I do not think that questions of the admission and selection of students matter very much except from an economic point of view. If we look back on the history of this great University of Cambridge, I think it becomes apparent that there is no necessary connexion between the standard of the honours degree of a university or the standard of the research work carried out within its walls and the standard of its entrance tests.

I think it is true to say that the economic argument does not necessarily pull in the direction of a higher minimum standard of entrance and graduation. It has often been contended that entrance standards should be raised on the ground that it is wasteful of the time of candidates and of the university's resources to allow students to enter the university who are foredoomed to fail. Provided the standard of pass is appropriate in the circumstances I would entirely agree with that statement, more particularly if the university in the particular country or community is already producing as many graduates as that country or community needs. There is a different situation, however, if the university is not producing as many graduates as the country needs, and then other considerations become important.

I have in mind a remark that a very highly placed and learned civil servant once addressed to me. He said: 'You know, you must train enough people to do the world's work even though you have to lower your pass standards further than you would wish.' There is a good deal in that, and it interested me a great deal to read a little while ago a report in the *Listener* (6 April 1950, page 605), of an address over the air by Professor P. M. S. Blackett. Whether Professor Blackett's views represent those held in this country I do not know, but what he had to say seemed to agree very much with my own feeling in the matter. He said: 'While there is an urgent demand from industry for

all the scientists which the universities can produce, and while the teaching profession is crying out for hundreds of science teachers, and is threatened with a serious drop in teaching standards if it does not get them, surely the job of the university is to select the best students it can and train them as well as it can. It need not worry very much if the resulting product is or is not a little better or a little worse than at some other period.' Often, I suggest, it may be better to have a less well-trained graduate than no graduate at all.

Coming back to the economic aspect of the matter, it seems to me that there are at least three facts to consider. First, you may put the question 'Are more than enough graduates being produced for the community's needs?' If so, then from the economic point of view it might be proper to raise standards of entry, so that as far as possible no more students would enter than would suffice to produce the necessary number of graduates, and so prevent the waste of resources, if there is a waste of resources, in producing an excess.

Secondly, it may be found that too few graduates are being produced for the community's needs. That may be due to a number of circumstances. It may be due to the deterrent of an unnecessarily high standard of entrance or an excessively high standard of graduation, or it may be due to the lack of sufficiently able young people in the community or of sufficiently able young people who can afford to attend or who wish to attend the university. In so far as the shortage is due to excessively high standards of entrance or graduation, there may be a case for lowering either or both of them.

Then there is the third case, an unfortunate one, that the university may not have the resources to train more than a given number of students. It may lack buildings, or it may lack staff. Neither lack is unknown in universities. In that case it may be forced to make adjustments, and you know the kind of adjustment which has to be made, by adopting some method of selection to limit the intake to the number with which it can cope. That may cause it to insist on a very high standard of entry and graduation.

That position may seem very attractive to some people, and the standard may be high for both entry and graduation; but I suggest that if that is the only basis on which this high standard is maintained it is a misfortune to the community. To a community starved of the professional experts required to provide its necessary services, academic preciosity is no compensation for an insufficiency of graduates. It seems to me that selection imposed solely because of lack of university resources must almost always be a misfortune for the community.

Those are all general observations, and, having made them, I come to the New Zealand experience, about which Dr Foster wanted me

to say something. I do not think that it throws much light on anybody else's problem. For the greater part of the history of New Zealand, down to 1943, admission to matriculation status was secured in the case of the great majority of students by passing the entrance examination. The standard which was nominally required from 1911 onwards was based on a standard such as might reasonably be attained by a pupil with four years' training in a secondary school. I could give you the details of the examination, but it is not worth troubling you with them, beyond saying that there was a limited number of subjects and there were considerable limitations on the choice which might be made from that limited range, and there were some required subjects—English, mathematics, and Latin, Greek, French and German were in varying degrees given some preference and required to a greater degree than the other subjects. It was that sort of examination, and the theory was that it represented four years' training at a secondary school, to which young people went at the age of $12\frac{1}{2}$–$13\frac{1}{2}$.

You may wonder what the purpose of the examination was, and there have been many discussions on this. One view was that the purpose of the examination was to protect university standards by ensuring that only those qualified to benefit by a university education should be admitted. What were the university standards? The answer is easy; the standards were the degree standards, and it was very much hoped that they were the same as those of the universities in England. However, as time went on the entrance examination gradually became the general leaving examination of the secondary schools, and it was taken by a great many pupils who had not the slightest intention of coming to the university.

That development coincided with another which tended to focus public attention on this examination. That other development was the very great increase, brought about largely by more generous government financial assistance, in the number of those attending the secondary schools, and therefore in the number of such schools. There was a diversity of ability in the pupils, and that led to a demand for a wider range of subjects to be taught in the secondary schools. That was reinforced by a new and progressive attitude in some of the schools themselves.

Some of the new subjects which were introduced, or which it was desired to introduce, were not included among those to be taken for the entrance examination, and, as this entrance examination had become a sort of general school-leaving examination, the schools said that the entrance examination was having a cramping effect on their development. This examination was for the mass of the pupils the leaving examination, and therefore the schools were almost com-

pelled to require all their pupils to take courses conformable with it, whereas for many pupils those courses were unsuitable.

Another thing which happened was that many people lost their belief in the value of that examination, or of any other examination for that matter, as a protection for university standards. I do not say that everybody took that view, but belief in it had become somewhat shaken, and scepticism on that point was a good deal reinforced by the Thomas, Beeby and Oram report to which I referred earlier, which showed that there was not very much relationship between success in the entrance examination and success in the university degree courses.

The result was that we adopted a new system, called the 'accrediting system'. Under the accrediting system the examination was retained, in a much modified form, but a candidate who entered for it was considered qualified for entrance if, being a pupil in an approved secondary school, he had completed a secondary course of not less than four years and was accredited—that is to say, certified—by the principal of the school as fit to undertake university studies. The examination remained for those who, being pupils of an accrediting school, were not accredited, or who were not pupils of an accrediting school. Under the latest variation of the regulations the candidate has to be recommended by his school principal in the subjects for which he has entered for the examination. The examination is still at the back of it all, but it is a somewhat different examination. The range of subjects has been extended, some less academic subjects have been included, and the restrictions on choice have disappeared.

The new system has had two consequences. First of all, it has saved an enormous amount of labour on the part of university staffs in examining candidates, and that is a good thing. Secondly, it has undoubtedly freed the schools to a very large extent, so that whether they are impelled by educational considerations or whether (as I suspect is sometimes the case nowadays) by shortage of staff qualified in particular fields, they have open to them a relatively wide choice of subjects in which they may give instruction.

What are the consequences to the universities? We have had two inquiries into the matter since the system started, and I think that the view held is that so far as the general intellectual level and calibre of candidates is concerned there has been no falling off which can be discerned—not that it is easy to measure these things, but that seems to be the view of those who are qualified to express an opinion. It may be that the contrary is the case and that students are rather better prepared, because they now have to stay four years at school. The old examination had nominally to be taken after four years, but

many pupils took it after three years. At the present time an accredited pupil has to have four years at school, and the four-year standard has become a real one.

I think that the chief effect of the system, so far as the University is concerned, arises from the wider choice of subjects open to candidates. Except in the case of English, it will tend—I do not say that this is the position at the moment—to be less and less open to the University to assume that students have had adequate school training in any particular subject. That may in time have two effects. First, it may make it less feasible for the University to insist on degree courses containing particular subjects, such as Latin or a modern foreign language. Secondly, the position may be reached which I believe has been reached in some countries, in which the university has to make provision in what were until recently normal school subjects for students who have had no training in these subjects, before coming to the university. In some of these subjects the time may come when the university cannot assume any knowledge on the part of an entering student and it may have to give instruction of a pre-degree course nature for those without sufficient secondary school training in such subject. Those are possible trends; they have not been realized yet.

The question arises whether the new accrediting system gives a better indication of the student's prospective success at the University than the old examination. I do not think that there is any evidence that it does. The only factors—and this again is a truism—which seem to bear much on it are two. We have kept records showing what has happened to entering students over eight or nine years, and all that we have discovered is that the pupil who stays at school for a year after he has qualified to enter the university does very much better than the pupil who comes straight there, which is what one would expect, and also that the undergraduate who devotes his whole time to university studies does far better than the part-time man, which is also what would be expected. Those are the sole conclusions which we have been able to draw from the statistics which we have kept so carefully.

That is the story so far as I can take it from our point of view. I shall say only one thing more, and that is that there is no question that the problems which we in New Zealand are facing in relation to entry to the university differ in many ways from the problems which face you in the United Kingdom. I think that that is because in a young and expanding community the need for professional services is greater than it is in an older and more fully developed community. That is probably one reason why rather more young people attend the university in New Zealand than is the case here,

and that may also be one reason why our problem of entrance and selection appears to be in some ways different from yours.

Professor J. Z. YOUNG (*Professor of Anatomy, University of London*): We seem to discuss these problems in what to my mind, as a biologist, are non-scientific terms. I want to call your attention to the relation between the student as we get him from the schools and what we try to do with him when we have him in the university. This problem is surely a fundamental one, which can be treated scientifically, if we are prepared to use that word in educational matters at all. Many people still cling to the belief that they, as individuals, know how to admit students, and that where there is a *numerus clausus* methods and ideas are available by which to frame a reasonable theory of how admission should be done. It strikes me, however, looking at universities, that these opinions are often not grounded in any sort of reasoned empirical study. We have very little empirical material on which to base our statements in these matters, and we use words that are very often without any great content in trying to speak about the conditions of the brains of students when they arrive in relation to the changes we intend shall take place in the university.

However difficult it may be I believe that we should try to consider what is the best thing to do with a given type of human brain coming from a given society into a university. In primary and secondary education the student has to learn to use words and to operate symbols in the correct way, but he is not able to criticize his own schemata. We should bear in mind that in the earlier stages, the brain has to acquire apparatus with which to operate. What, then, are we to do in the later stages? Is it simply a matter of continuing the same process by adding more schemata? I doubt whether it is possible to do so after the age of fifteen or sixteen; the process of providing a knowledge of the use of symbols is largely over then, and we have to do something different. We have to give the student practice in the use of symbols and their application to life. We have to give him a sort of 'bench test' of the apparatus he possesses and allow him the opportunity to use it and apply it as widely as possible, to test the validity of the systems of language and thought he has been given and thus to learn how to apply them in life later on. If that is the case, what are we to look for in deciding which students are best able to spend their time profitably at the university? I would make the point that this trying out of schemata is not something to be done by the best students only. This is a matter to which the opening speaker called attention. To try out what his knowledge is worth is not something which is useful only for the first-class or even the second-class student, but all individuals can profit by the chance to do it. All reasonably

well-trained individuals can gain greatly from controlled criticism of their methods of thought. We can even help them by showing the weakness as well as the strength of the methods they have learned. Some weakening of faith in verbal machinery increases its value by showing that any one system is only one among many that are possible.

I have a feeling that the different sorts of schemata which students will have acquired at school all need trying out in this way, and we could make a good case for saying that some people who do not do well in ordinary types of examination in their school days would still learn a great deal by being given an opportunity to try out the approaches they have learned at a university stage. I have often noticed that students who are rated below average gain most by being shown the inefficiency and relativity of their schemata. Their poor performance has been due to excess of anxiety or to scepticism about what they have been taught at school. They have not done well because they have been in a sense too clever, but nobody has told them that their criticisms are sound. It is often the boy or girl who does not ask too many questions who gets the best marks. Many students will show a remarkable development when they find that some of their doubts have been justified.

If that is the case, the corollary for our admission policy should be that we should not only take what are commonly called the brightest boys and girls from the top of the secondary schools. I say this with considerable trepidation for I know what it implies. I do not mean that we should take people who are failures and have no interest in their work, but if our universities are to be representative of the communities in which we live, as I think that they should be, we have to be careful about the sort of standards we adopt for admission, remembering always that our methods for assessing the characteristics of an individual and his suitability for university training are not based on sound inductive evidence and are grossly liable to error. In the Medical Faculty at University College, London, we have tried to carry out some investigation of the tests that are used for admitting people into universities. On the whole our conclusions have been similar to those of others working in the same field, and are not very promising or constructive. At one time we were much impressed by the idea that since the manipulation of language is important for any academic work, some type of essay test should be regarded as fundamental, and that the result should be an important criterion of admission. I thought that I should be rather good at judging students by their essays, but correlation of the records of my markings with my own re-marking and other people's assessments at the same or at a later stage was very low. When several people marked the essays, the marks did not agree. Marking essays is extremely difficult. It may

be useful for students to write essays on coming up for examination, because they may make them work harder at their language at school, but the result of different people's assessment of those tests are of little use as criteria for admission.

Intelligence tests are only useful to eliminate certain people who are quite unsuitable for university education, and I am not sure that they are really useful even for that. The I.Q. of medical students admitted does not correlate highly with performance in the university, and that has also been our experience with tests specially devised with the idea that they would be suitable for medical students. The results of interviews also correlate poorly with performance in the university. We have an interview system whereby we have three sets of interviewers each working separately with the candidates and then comparing their marks afterwards, but these marks do not correlate well with the later assessment of the student when we get to know him in the university.

The only thing which we have found that does correlate well with later performances is school records. We ask the schools to give us reports on their candidates in the form which we prescribe. We send to schools a sheet which says 'How do you rate this man for intelligence, for reliability, for sociability', and for half a dozen qualities of that kind. The answer has to be given by rating on a five-point scale. Some headmasters and headmistresses do not like this form, and of course we also let them write long letters in which they explain that the candidate is a very good person. The results do correlate, however, with our later assessment of the candidate when in the university.

I shall not detain you longer except to make the plea that in spite of failure we should continue to try to make these questions matters of controlled test. The control of what you are doing is tremendously important in university life. I feel that we do not use it nearly enough. Engineers know that a machine with no feed-back is unstable. How much of our university education is unstable because there is insufficient feed-back from the results shown by students to the people who are supposed to be managing the machine? It may not be very comfortable to ask oneself continually what one is doing and what the results are, but it is of fundamental importance to do so in relation not only to admission policy but to the whole of university life.

Sir IVOR JENNINGS (*Vice-Chancellor of the University of Ceylon*): It is obvious from what has been said this morning that there are different problems applying to different universities in the Commonwealth. My task is rather to formulate the general questions which may apply to all the universities concerned. I should, however, begin by saying

a little about Ceylon, not because we have any special problems and certainly not because we have anything to teach other universities, but simply because, being the only university in a small country, it is possible to see the problem very easily indeed.

We have estimated that Ceylon requires about 350–400 graduates a year, spread over the various faculties in a known ratio. We therefore consider that what we should do is to try to admit the number of students which will produce that number of graduates, and accordingly we admit about 520 students every year, with a separate quota for each faculty. If we accepted all students with the equivalent of an Australian or South African matriculation qualification, I think we should admit as many as 2000 a year. If we had the higher examination standard of the United Kingdom—that is, at least two passes at advanced level in the general certificate of education—we should probably admit about 800–1000 a year. Our task, therefore, is to admit from either of those groups (one of which includes the other) about 500–520 students.

If we admitted a larger number, one of two things would have to happen: either we should need a much larger university or perhaps more universities, and therefore much more money from the government of Ceylon—and we consider that to be politically impracticable; the government is already spending a great deal on university education, and it needs to spend more on primary education and various social services, and we cannot expect it to produce funds for graduates who are not needed—or we must practise what is sometimes called dilution, that is, the use of our existing facilities, buildings, staff and equipment for a much larger number of students.

That second alternative means inevitably a lowering of standards. I do not mean particularly examination standards. I believe that there is some evidence—and perhaps some of those who are here can give us that evidence—that if you admit a larger number of inferior students the examination standard tends to go down, because of the psychology of examiners; but I am referring primarily to standards in other directions, standards in respect of the general education which is given by the university to all its students.

I think that what happens in many universities is that, instead of trying to select the 500 or its equivalent at the outset, everybody who reaches the minimum examination qualification is admitted, and then there is an immense slaughter of the innocents at the end of the first year. It would be helpful if some of the universities which follow that practice would tell us what the consequences are, because those of us who do other things feel off-hand that the first-year classes would be over-burdened, and that the university would suffer by having an excessive proportion of young undergraduates. The teaching

schedules would be heavy, tutorial classes would be difficult to arrange, and time, energy and money would be devoted to students who gained little from the expenditure and who would in fact be better advised to follow other careers. It would be very helpful if universities which practised this method would let us know whether that is so or not.

If we select students, then of course we must know what sort of students we want and how to get them—two statements so obvious as hardly to be worth making, but in the case of the University of Ceylon we do not know the answer to either.

Thirty years ago, when I was an undergraduate in this University, there were many non-matriculated students who had passed no examination and never would pass any examination. They were excellent fellows. They educated, or helped to educate, those of us who sometimes did pass examinations. Possibly we helped to educate them too. Many of them now hold positions of responsibility. Are we to cut them out? If we do not cut them out, we have to cut out, if we are going to be limited to 500 or its equivalent, many more of greater intellectual capacity.

After becoming a graduate of this University I became an examiner, and I found that a great many students of very low intellectual quality were getting third-class and ordinary degrees. I was moved to protest, and the Chairman very correctly administered a mild rebuke. 'Jennings', he said, 'you have been away from Cambridge too long; you ought to know that an ordinary degree means only that the holder has spent three not unprofitable years in Cambridge.' I am not at the moment concerned with the profit to those deserving pass-men so much as with their influence on other students. I think that it is desirable to have a considerable variety in one's students. Cambridge would be a very different place if there were four or five thousand 'scholarship-wallahs'. On the other hand, can we in the more modern universities keep out some of these 'scholarship-wallahs' to let in the pass-men? That, I think, is the problem relating to the character of the students who want admittance.

On the question of the method of selection I need not say very much, because Professor Young has just given you a much more expert opinion than it would be possible for me to collect from the literature. The methods of selection have been mentioned, and I think that there is a large measure of agreement on the suitability and advantages of principals' reports, if it is possible to obtain good reports from principals. Our experience has been the same as that of Professor Young, namely, that principals like to give long statements in praise of all the geese whom they want us to turn into swans.

Those, I think, are the main problems. I do not want to take up more of your time, because I hope that there will be many on the floor of the house who will be able to illustrate, and possibly to answer, these problems for us.

DISCUSSION

Mr M. BASHIR (*Panjab*): I have heard with great interest the various points raised by the previous speakers with regard to the admission and selection of students by universities. I agree with Dr Williams that the problem of admission and selection of students is one which depends on the facts and circumstances of the particular country in which it falls to be solved. In the University of the Panjab and other large universities of an affiliating type in the under-developed countries the position is not only very complex but has assumed a very serious aspect. The University of the Panjab has thirty-eight colleges affiliated to it, and its jurisdiction extends to about 800 miles. This year about 40,000 students took the final school examination, called matriculation in our case, and nearly 40 per cent were successful. Of those, a large number were placed in the third class, some in the second, and very few in the first. Most of these students, if they have not anything better to do, usually seek admission to the various colleges. Some of the better colleges refuse to admit the third-class students, but eventually all of them obtain admission to one college or another.

The admission of such students who are not fitted intellectually for university education lowers the standard of university teaching. It not only leads to waste of time and effort on the part of a large number of those who might have done better in other walks of life, but is a great drain on the resources of a poor country which needs funds to undertake schemes of national importance. In the circumstances, I should have no hesitation in suggesting that a special entrance examination should be held by the universities to determine which of the candidates are likely to benefit by higher education. It would be better to do this sifting at an early stage, as it will avoid frustration amongst those who may find themselves, after getting a third-class degree, at a loose end and without any prospects of employment. This may lead to the creation of a class of educated unemployed, dissatisfied with their lot and a possible menace to society.

I do not agree with Professor Young that since we are ignorant of the extent to which a person is capable of developing intellectual powers at a relatively late stage we shall not be justified in excluding him. The system advocated may work in Great Britain or in America,

where the number of pupils in a class is small and the teachers are in direct touch with them and can judge their performance in class, but in countries where there is a great shortage of staff and hundreds of students in a class a teacher hardly has a chance to know his pupils, apart from the question of rating their day-to-day work.

We have to be very careful in dealing with those who apply for the professional courses. A man may not have the slightest aptitude for the medical or engineering professions, but may seek admission to medical or engineering courses because of the prospects later on, and if no check is applied efficiency must deteriorate. The tests, I suggest, would vary according to whether students were going in for arts, science or professional examinations, and should be conducted by the administrative staff of the university. This would save the valuable time of the principals and staff of colleges, who have to spend a great deal of their time in interviewing large numbers of applicants.

Mr C. P. DENT (*Fort Hare*): I want briefly to make two points. First, if I may speak for the Africans, at least in Southern Africa, since they have no representative of their own here, I would say that, in relation to their admission to universities, there should be no relaxation whatever in the standards required for European candidates. Africa has been asleep for a long time, but it is now waking up and is very anxious to conform to western educational standards. Although Africans as individuals may ask for concessions, the people as a whole will condemn any such request.

The second point is this: the occasion for this discussion seems to be some alarm over wastage in the first year of our university courses. We are inclined to put the whole blame on the student. Now it is a feature of any civilized group that it is able to take criticism, and when criticized will examine itself to see whether there is any substance in the criticism; I suggest that we look at ourselves, and that a reason for this high percentage of failure is often not weakness in the students but weakness in the standard of instruction which is given to them. I have a personal friend who is a doctor, and a very good doctor. He tried to teach his son the alphabet; he attempted to teach him the whole alphabet in one lesson and called him a fool because he could not learn it all at once. That attitude is not uncommon and is very discouraging to the learner.

It is my personal experience and the experience of those with whom I have discussed this matter, and I think the experience of everyone who has been at a university, that many of the lectures which one was required to attend were totally uninspiring and not worth attending. When that happens to the first-year student his enthusiasm and interest are apt to be destroyed. Then also lecturers, particularly in

the first year, often seem to forget the standard of attainment of the students they instruct; they make no effort to think back to what it is possible to do at that state; they assume that a high percentage of failure indicates a high standard of instruction, and that the weakness is in the student. A considerable part of the remedy for this problem lies in a very careful re-examination of the instruction given to students, particularly in the first year, and the careful choice of those who are to instruct them.

Dr K. MELLANBY (*University College, Ibadan*): We in Nigeria have a selection problem which perhaps makes the selection problems of other territories look very simple. We have 30 million people, and among those 30 million people, being a young country, the number of children is estimated to be considerably greater than the number of children in England. From that 30 million we have at the moment to select 130 a year for entry to the University College, and that number of 130 is at present being selected from a group of about 650 applying for entry to the College and holding the minimum qualifications (i.e. school certificate with five credits). Within ten years I estimate that the University College will have at least 10,000 people clamouring at its doors, and therefore the problem is an urgent one.

We have tried several methods of selecting entrants, and I think that we are as ignorant as anybody else about how to devise a satisfactory method of selection. I am not at all sure that if we put the names into a hat and drew some of them out we should not do just as well as we do at present with our examinations, our interviews, our intelligence tests and so on. We have used some intelligence tests and, contrary to the experience of other people, they do seem to give a positive correlation with future academic performance—not a very high correlation, but some correlation. The correlation from school certificate and other examination results is almost negligible. I would urge that, although some research has already been done on this question of selection, it is a problem which in both developed and under-developed countries should be given a high priority when research plans are being drawn up.

Dr H. R. RAIKES (*Witwatersrand*): This question of selection is closely linked up with the subject which we discussed yesterday. In my opinion, provided the undergraduate is interested in his work, and provided that the course which he is taking is one of university rank and is properly conducted by those who teach in it, it does not matter what course he takes at the university. In the same way today, provided the student is interested in his work, it is quite easy, on the basis of the work which Dr Biesheuvel did in South Africa for the

South African Air Force during the war, to select people who will pass their examinations, but I submit to you that passing examinations is not the be-all and end-all of university life. What we want is something very much more difficult, and something which we were just getting towards during the war, when it was quite easy to say whether a man would get his wings, but very difficult to say whether he would face the enemy. What we really want is some form of test to let us find out whether a man will make a success of his life after he leaves the university.

That is the main object to which we should devote our attention. It is a matter of extreme difficulty and cannot be solved by any short-term scheme of tests. Naturally a man has to pass his examinations, but what we want to know is whether he will make a success of his life after he leaves the university. It is to that that we have to devote our attention, and it is most important to get down to it; but we shall not get any results in less than fifteen years, which is a very long time. Let us therefore get busy and see what we can do to start such a scheme at the earliest possible moment.

Professor E. A. PEEL (*Birmingham*): There are two points that I want to take up. The first concerns the low correlations reported by various investigators. It is well known that the degree to which the population tested has been selected by previous examinations reduces the measured correlation. You may reply that we are only interested in this highly selected population which has already passed through to the general certificate at the advanced level. In this case I should like to say that I have figures which do not support Professor Young's results. I have worked on the problem of selection of dental students and engineering students, and I have obtained correlations comparable with the correlations between entry examinations to secondary schools and the secondary school leaving examinations. That is evidence that the picture is not so black as we are sometimes led to believe.

My second point concerns the value of adding new material to our examination papers if the tests correlate positively at all. Their addition must raise the predictive value of the whole array of material used. I would add that I think that we should do more with regard to assessing and testing the interests of the applicants and also finding out a little more about their background, whether or not they have been over-taught and so on. Overall, I think that we gain by making this examination richer.

The CHAIRMAN: I must now bring the discussion of this subject to a close, and I thank you for your very kind co-operation, as a result of which I am able to hand over this meeting to Sir Philip Morris at exactly 12.5, the time laid down.

FINAL PROCEEDINGS

Sir PHILIP MORRIS (*Chairman of the Association of Universities of the British Commonwealth*): This Congress is shortly coming to an end, but there remains the very proper duty, which on this occasion is also a very real pleasure, of expressing our thanks to those to whom they are due in such very large measure. It is proposed that we should consider and, if thought fit, pass two resolutions: the first to the Trusts and other bodies who have helped to make this Congress possible, and the second, as you would wish, to the University of Cambridge, its Colleges and its staff. The Principal of the University College of Khartoum has kindly agreed to propose the first resolution.

Mr L. C. WILCHER (*Principal, University College of Khartoum*): I should like, as a mere green string observer from a country lying outside even the periphery of the Commonwealth, to move a vote of thanks in the first place to the organizations and other bodies lying outside the periphery of Cambridge which have helped to make this Congress such a notable success. First of all I would refer to those organizations which have enabled so many of us to get here, and particularly the Carnegie Corporation of New York and the Imperial Relations Trust, which contributed so generously to the travelling expenses of so many of the delegates. We shall also wish to thank the University of London for the excellent party which they gave for us last Saturday, even before we got to Cambridge. At Cambridge we were the guests of Her Majesty's Government at Magdalene College on Wednesday, and many of us have been guests, or are to be guests, of the High Commissioners and of the Goldsmiths' Company.

All this hospitality reminds me of a story, which I believe to be true, of the other St John's College, at Oxford. When Archbishop Laud decided to extend the College he raised for the purpose some £3000, which was a considerable amount in those days, and the magnificent Jacobean quadrangle in St John's was built for that sum. When it was built, Laud decided that he had better open it in style, and he asked the King to come and do the job. The King spent a week in St John's, and the cost of entertaining him was £3000. For my part, I feel a little as I hope that King Charles felt at the conclusion of that week, and if when the revolution comes my head is also cut off, I shall at least be able to recall that I too have lived—for one week.

We must all be thinking at this moment of Cambridge, but it would be wrong to allow our gratitude to Cambridge to eclipse our gratitude to the other bodies who have made our getting together so

extraordinarily pleasant. I have great pleasure, therefore, in moving this vote of thanks to them.

Mgr O. MAURAULT (*Rector, University of Montreal*): In seconding the vote of thanks, I wish to add a few words of felicitation and thanks to all who have had some responsibility for the organization of this Congress in Cambridge and, in order to do it more conveniently for me, I ask your permission to speak in French.

Félicitations et remerciements, ai-je dit. Cambridge se prête admirablement à une réunion d'intellectuels. Elle a une ambiance et un décor que les siècles lui ont donnés, et que nous, Americains, nous ne pouvons que lui envier; mais pendant que nous y sommes, nous en jouissons intensément. Merci, messieurs, de nous avoir fourni l'occasion d'en faire l'expérience.

Vous êtes cependant beaucoup plus directement responsables de l'organisation même de ce Congrès; s'il a rapporté un si beau succès, c'est à vous que nous le devons. Le programme des séances a été fixé soigneusement par vous, et les relâches—cocktails, garden parties, etc.—habilement réparties, de manière à maintenir l'entrain et la bonne humeur parmi nous. Je ne parle pas de ces déjeuners et de ces dîners d'apparat, qui ont non seulement flatté notre gourmandise mais aussi charmé nos yeux et nos oreilles.

Pardessus tout cela, Messieurs, je tiens à vous féliciter et à vous remercier de votre courtoisie et de votre sens délicat de l'hospitalité. On voit bien que vous en avez l'habitude, une habitude séculaire, qui fait partie de vous-mêmes et que vous deployez tout naturellement. Sachez bien que rien n'est plus agréable à ceux qui en sont les heureux bénéficiaires.

Nous garderons donc de vous, de vos vieux collèges, de vos chapelles, de vos gazons, de vos jardins fleuris et de votre 'illustre fleuve' un souvenir ému et reconnaissant.

Je m'en voudrais de ne pas nommer ici un homme vraiment dynamique, à qui nous devons en grande partie le succès de ce Congrès. Il s'agit de M. Foster.

I therefore wish to second the motion.

Sir PHILIP MORRIS: I am sure that you will wish to pass this vote of thanks unanimously.

The vote of thanks was carried unanimously, with acclamation.

Sir PHILIP MORRIS: The second resolution is, as you would expect, to the University of Cambridge, its colleges and its staff. The President of the University of Toronto has kindly agreed to move this resolution.

Dr S. E. SMITH (*President, University of Toronto*): Mine is an assignment that I am sure every member of this Congress would crave. The assignment is, as suggested by the Chairman, to propose a vote of thanks to those who have been our hosts in Cambridge during this week and to express our gratitude, which I know is deep and will be abiding. It has been written that it is more blessed to give than to receive. Cambridge has given much, and therefore indeed it must be very blessed. We add to that blessing our praise for such gracious and generous and indeed unbounded hospitality.

At the last session of a week of Congress, I am sure that you will agree with me that brevity is the soul of sincerity, and when I say to our hosts here 'Thank you', I know that they will take it as something coming from our hearts.

It would be invidious to mention particular individuals, but I desire to make special reference to the Council of the Senate of Cambridge University for its invitation to hold the Congress here, and I would mention particularly the colleges for their hospitality to us. I also have in mind, as you have, the visits that we have made to the Engineering Laboratories and to the Cavendish Laboratory, coupling with those two institutions the names of Professor Baker and Sir Lawrence Bragg. I also wish to mention the authorities of the University Library. We all appreciated very much the gift by the University Press of Cambridge of a copy of Roberts's *Introduction to Cambridge*, a perusal of which gave something of a background to those of us who are relative strangers to this ancient foundation, and enabled us to appreciate more clearly the lure and the lore of Cambridge.

I also thank the English-Speaking Union for their hospitality to the ladies who accompanied the delegates to this Congress, and I thank the wives of the heads of colleges for their gracious entertaining of the ladies in our delegations.

In every conference a great deal is done behind the scenes, a great deal of important and significant work. In this context I would mention individually the Cambridge Registrary, Mr Rattenbury, and particularly the First Assistant Registrary, Mr Kidd, for co-ordinating all the activities of the hospitality which has been extended to us and for looking after the reception and the departure of delegates.

There was once a clergyman who became ill, and a parishioner sent to her revered minister a bottle of brandied cherries. He enjoyed them very much, and he sent her a little note saying: 'I thank you for the cherries, but particularly for the spirit in which they were sent.' I endorse that sentiment now, and I would say Thank you, Danke schön, Gracias, Merci mille fois, or, in the North American idiom, Thanks a million. I formally propose this motion.

Hon. Sir JOHN MORRIS (*Chancellor, University of Tasmania*): I have pleasure in seconding the motion. As one of the delegates for Tasmania I feel that I am letting the Australian side down in not being able to deliver to you as eloquent and witty a speech in Australian aboriginal, as the one which you have just heard in French from the Rector of Montreal.

We have heard a good deal in this Senate-House of the necessity for a wider general education, and outside the Senate-House I have been impressed by the fact that the need is a very real one indeed, because many of the delegates, specialists of renown, have said to me 'Where is Tasmania?' I can only reply in the words of an American newspaper which recorded an interview with a Tasmanian. This newspaper said to its readers: 'Perhaps you do not know where Tasmania is. Well, you have heard of "down under". Tasmania is down under "down under".'

We are probably, if not the smallest, one of the smallest universities in the Commonwealth, but we follow very humbly and very proudly the great university tradition of this country. To be in this town at all is a privilege. To be here welcomed and feted and taken to the hearts of the people of the university almost gives one the feeling that one has been a member of the Communion of Saints. If they are saints, then it is an even greater pleasure to reflect that for one week at least I have been associated in this life with those from whom I feel that I am destined to be parted for ever in the next!

I support entirely everything that has been said by the mover of this motion. We are all grateful for what has been done for us by all those who have been referred to by the mover and we thank them very warmly indeed.

The resolution was carried unanimously, with acclamation.

Sir LIONEL WHITBY (*Vice-Chancellor, University of Cambridge*): To render thanks for thanks is a difficult task, and should be done most briefly. Cambridge has been honoured, delighted, pleased that the Congress has been held here. We are not, let me say at once, 'saints'; we have our troubles here, as everyone else has, but we are conscious of the beauties of our small city, and we are very glad to be able to share them with so many other people and to have the opportunity to show them to representatives from every part of the British Commonwealth, and also to our friends from America.

It has been a pleasure and a privilege to us to have the Congress here, and I speak not only on behalf of the University but also on behalf of the individual colleges. If in our simple way we have made you feel at home and welcome, and if you feel that you have made friendships here and have found and made marks and impressions

which perhaps may bring pleasure or satisfaction to you in the days to come, then we shall be amply satisfied. We hope you will feel that it has not been a waste of time for you to come here and join in these deliberations and to see the beauties of Cambridge. I shall therefore terminate the Congress simply by thanking you for your thanks, and by saying that we have appreciated your presence here as much as I hope that you have appreciated being here.

Sir PHILIP MORRIS: I should like to be allowed to make a few short references to some people whose services I know you would like to be remembered. First, we have had magnificent gifts of food and drink from South Africa and Canada, which have poured into Durham and Cambridge to assist with the rationing situation.

Secondly, reference has already been made to the office staff of the Association, and I know that you would not like them to be left out of the record.

Thirdly, keeping a silent and busy vigil has been the shorthand-writer who will presently give us the fruits—I hope not Dead Sea fruits—of the Congress.

Lastly, I have a special debt of gratitude to discharge to those who have so agreeably and so efficiently taken the chair and delivered opening addresses at each of the main sessions of the Congress.

All good things come to an end, and the best things are best finished while they are still at their best. The Congress is closed until 1958.

APPENDICES

I

REPORT OF THE EXECUTIVE COUNCIL OF THE ASSOCIATION FOR THE PERIOD JULY 1948 TO JUNE 1953

2

INTERCHANGE VISITS BETWEEN COMMONWEALTH UNIVERSITIES: A REPORT BY THE COMMITTEE FOR COMMONWEALTH UNIVERSITY INTERCHANGE

3

THE EFFECT OF SUPERANNUATION SCHEMES ON MOBILITY OF ACADEMIC STAFF WITHIN THE COMMONWEALTH: A NOTE BY THE PRINCIPAL OF THE UNIVERSITY OF LONDON

APPENDIX ONE

ASSOCIATION OF UNIVERSITIES OF THE BRITISH COMMONWEALTH

REPORT OF THE EXECUTIVE COUNCIL AND COMPARATIVE FINANCIAL TABLES

FOR THE PERIOD JULY 1948 TO JUNE 1953

In accordance with the practice at pre-war Universities Congresses the Executive Council of the Association presents for consideration at the Extraordinary General Meeting of representatives of member institutions to be held at Cambridge on 15 July 1953, a report on the work of the Association of Universities of the British Commonwealth during the quinquennium July 1948 to June 1953.

REORGANIZATION OF THE UNIVERSITIES BUREAU

The sixth quinquennial Congress held at Oxford in July 1948 decided that changes should be made in the mode of operation of the Universities Bureau of the British Empire, and certain steps to have the constitution amended in accordance with these decisions were subsequently taken. The consent of the Board of Trade was obtained to a change of name of the Bureau to 'The Association of Universities of the British Commonwealth' as proposed at the Extraordinary General Meeting held during the Congress, and the new name came into effect on 10 February 1949. The consent of the Board of Trade was also obtained for alterations in the Articles of Association made at that General Meeting, and for those made at another Extraordinary General Meeting convened by the Executive Council on 27 January 1949, to give effect to decisions made at the Congress of which notice could not be given at the previous Extraordinary Meeting. The principal objects of these changes were to redistribute the representation of the different parts of the Commonwealth on the Executive Council and to reduce its membership from twenty-one to sixteen, chiefly by a decrease in the number of representatives of the United Kingdom universities; to make it a regular practice for overseas member universities to appoint their vice-chancellors or presidents as their representatives on the Association instead of as previously appointing a London resident, each such representative being allowed to appoint a personal deputy to attend meetings in his

stead; and to require accounts to be kept separately for the parts of the Association's work which affected certain groups only of its member universities.

SUBSCRIPTIONS AND FINANCE

The sixth Congress resolved to make certain changes in the finance of the Association, particularly in the direction of making certain of its activities more self-supporting than previously. It was decided to alter the whole basis of the subscription scales which had until then consisted of different rates for universities in (*a*) Great Britain, (*b*) Ireland, and (*c*) other parts of the Empire, and to institute a general subscription payable by all members according to size and to levy additional contributions and charges on certain universities for work specially done for them (e.g. the United Kingdom universities, for the work of the secretariat of the Committee of Vice-Chancellors and Principals; or those overseas universities using the Association's office in connexion with their staff vacancies, for the services of the appointments department). These changes, after the necessary constitutional authority had been obtained, came into force for the financial year 1949–50, and the Association's accounts have since been published in a form which distinguishes between income and expenditure on:

(*a*) general activities;

(*b*) special activities for the United Kingdom;

(*c*) appointments.

The United Kingdom universities, whose subscriptions would have decreased under these arrangements, agreed to maintain them at the old rates in order to enable a surplus to be accumulated for a Building Fund which the Executive Council decided to establish with a view to the policy of providing a suitable headquarters for the Association in the future; at present this fund (to which was added the surrender value of an endowment policy amounting to £2500) stands at £7008. 7*s*. 1*d*. The subscription revenue from overseas universities has greatly increased, and substantial revenue now results from the appointments fees, though it is still less than the costs of the service provided.

COMMONWEALTH INTER-UNIVERSITY CONFERENCES

An important change of practice made at the 1948 Congress, as part of the reorganization of the Association, was the decision to hold meetings of the Executive Council from time to time outside the United Kingdom. In June 1949 the Council met in Canada at

Halifax; in August 1950 at Wairakei in New Zealand; and in January 1952 at Madras in India. On each of these occasions the visiting members of the Council were given the opportunity to visit the universities of the country acting as host to the meeting, and to take part in a conference with university representatives from that country. These meetings have only been made possible by a subvention from the Nuffield Foundation which has met the overseas fares of the visiting members and by the hospitality of the host universities and governments, but they have meant that the actual members of the Executive Council have been able to take part in one of its quarterly meetings each year, the other meetings being of course largely attended in the case of overseas members by their personal deputies in London. The following persons under these arrangements have participated in Council meetings held outside their own country, viz.:

CANADA

Sir DAVID LINDSAY KEIR (Belfast).
Sir WILLIAM HAMILTON FYFE (*Hon. Treasurer*).
Very Rev. Dr J. LOWE (Oxford).
Professor LILLIAN PENSON (London).
Sir RAYMOND PRIESTLEY (*Vice-Chairman*).
Professor DOUGLAS COPLAND (A.N.U.).
Professor W. PREST (Melbourne).
Dr R. S. AITKEN (Otago).
Dr E. G. MALHERBE (Natal).
Dr H. R. RAIKES (Witwatersrand).
Dr P. N. BANERJEE (Calcutta).
Dr S. M. HOSSAIN (Dacca).
Dr T. W. J. TAYLOR (West Indies).

NEW ZEALAND

Mr D. EMRYS EVANS (Wales).
Dr D. W. LOGAN (London).
Sir PHILIP MORRIS (Bristol).
Rev. Professor C. E. RAVEN (Cambridge).
Sir RAYMOND PRIESTLEY (*Vice-Chairman*).
Sir DOUGLAS COPLAND (A.N.U.).
Dr G. A. CURRIE (Western Australia).
Dr F. C. JAMES (McGill).
Professor J. MCKINNELL (Natal).
Professor J. T. IRVING (Cape Town).
Mr S. SINHA (Patna).
Dr S. M. HOSSAIN (Dacca).
Dr T. W. J. TAYLOR (West Indies).
Dr G. V. ALLEN (Malaya).

INDIA

Dr ERIC ASHBY (Belfast).
Dr D. W. LOGAN (*Deputy for Vice-Chairman*).
Very Rev. Dr J. LOWE (Oxford).
Professor Sir RALPH TURNER (London).
Professor J. W. COOK (Glasgow).
Professor T. HYTTEN (Tasmania).
Dr G. A. CURRIE (Western Australia).
Mr K. J. MAIDMENT (Auckland).
Dr S. SMITH (Toronto).
Dr G. P. GILMOUR (McMaster).
Dr E. G. MALHERBE (Natal).
Professor E. BATSON (Cape Town).
Mr M. TIMUR (Peshawar).
Dr LINDSAY RIDE (Hong Kong).
Mr D. M. BALME (Gold Coast).

The Vice-Chairman of the Association (or his representative) and the Secretary have attended each of these meetings with the assistance of a separate grant provided by the Imperial Relations Trust, which has also enabled the latter on each occasion to visit all the member universities of the Association in the region concerned.

ADMINISTRATIVE STAFF AND PREMISES

The staff of the Association has grown during the quinquennium so that it now consists of the Secretary, an assistant secretary, three assistants of graduate status, and fifteen other officers. The appointment of an Assistant Secretary was made in January 1949, when Mr A. L. Fleet joined the staff.

When this period under report began the office was housed in somewhat unsuitable accommodation at 8 Park Street, Mayfair, but in August 1948, it was able to move to 32 Woburn Square, Bloomsbury, whence in March 1949, it transferred to its present quarters in 5 Gordon Square, Bloomsbury, close to the site of the bombed-out pre-war office. These premises are in the precinct of the University of London, which has generously leased them to the Association for a short term, but during the next quinquennium the question of more permanent accommodation will have to be faced.

The Council has from time to time given consideration to the project of establishing a University House in London which, besides providing the office of the Association, could be used as a headquarters for all academic visitors to the capital, but from the present scale of the Association's resources it does not seem that this will be practicable in the near future. In the meantime the modest step has been taken of providing, with the help of a grant from the Nuffield Foundation, a small common room for visitors in the present office building.

COMMITTEE OF VICE-CHANCELLORS AND PRINCIPALS

The Committee of Vice-Chancellors and Principals of the Universities of the United Kingdom, of which the Association continues to provide the secretariat, has met throughout the quinquennium, holding ten or eleven meetings each year. In 1950 the Committee adopted a new constitution and placed its membership on a defined basis. The Chairmen of the Committee were Sir David Hughes Parry up to September 1948; Dr James Mountford, 1948–9; Sir Hector Hetherington, 1949–52; and Dr C. R. Morris from September 1952.

Some of the more important matters considered by the Committee during this period were:

Inter-availability of university entrance requirements.
Faculty requirements.
Selection of students.
Allocation of state scholarships.
Re-assessment of maintenance allowances for state scholars.
Procedure for local education authority awards.
Area of availability of local education authority awards.
Deferment of national service for university students.
Periods of training for ex-national service students.
Student health.
Welfare facilities for overseas students.

Research into the methods of university education.
Quinquennial estimates for the period 1952–7.
Earmarked grants.
Tuition fees.
Academic salary scales.
Supplementation of pensions to alleviate superannuation hardships.
Payment of family allowances.
Remuneration and conditions of service of university technical staffs.
Training of laboratory technicians.
Deferment of national service for junior laboratory technicians.
Higher technological education.
Research contracts between universities and government departments.
Delays in the publication of the results of scientific research.
Relations between universities and associated teaching hospitals.
Method of appointment to hospital positions associated with clinical chairs and readerships under the National Health Service Regulations.
Payment of distinction awards to full-time clinical teachers.
Classification of hospitals in relation to pre-registration house experience for medical practitioners.
Assessment and rating of university buildings.
Charitable trusts in England and Wales.
Commonwealth university interchange—British Council travel grants.
Recruitment for overseas academic appointments.
Rockefeller interchange scheme with west German universities.
Marshall scholarships scheme.
International Association of Universities.
Home Universities' Conferences.

APPOINTMENTS SERVICE

A substantial proportion of the effort of the Association's office is directed to the provision of a service whereby member universities can make vacancies on their staffs known throughout the Commonwealth and obtain independent and competent advice about candidates who are not available for local interview. This service is used mainly by university institutions outside the United Kingdom who want to invite applications from candidates in Europe, but arrangements also exist whereby announcements of vacancies, whether occurring in the United Kingdom or elsewhere, can be given publicity in all parts of the Commonwealth.

The procedure of the office in these matters is adapted to the requirements of the appointing university, the principle followed being that the Association acts primarily as the agent of its overseas member in publishing notices and having candidates interviewed, and that it does not itself aim at finding academic posts for graduates who wish to go abroad. The limited nature of its interest in the appointments field, though obviously of great value to some member universities, is not always understood by individual graduates, who seek to register their names with it as desirous of obtaining suitable employment of varying kinds.

This work has steadily grown during the period, there being a general tendency on the part of universities in many countries of the Commonwealth to channel all their overseas inquiries for new staff through the Association's office. Altogether during the five years nearly 1200 posts in Commonwealth universities were advertised through the Association's office. In about one-quarter of these cases the Association was also asked to make arrangements for applications to be considered after personal interview by competent authorities in London and to have a report transmitted to the university concerned. In all some 280 vacancies were filled by the appointment of persons from Britain (or in a few cases from other countries in Europe) who had applied through the Association. In this work the office has been greatly assisted by the honorary services placed at its disposal of many heads of departments and teachers in British universities in assessing the qualifications of candidates for the guidance of selection bodies abroad.

PUBLICATIONS AND INFORMATION

During the quinquennium there has been a very substantial increase in the work of the information section of the office, especially in connexion with the *Commonwealth Universities Yearbook*, the principal

publication of the Association. The size of the annual volumes of the *Yearbook* has grown steadily with the increase in numbers and activities of universities, and there is also an encouraging increase in the number of copies sold. The Association regards the annual production of the *Yearbook* as a major service to its member universities, as the book is widely used and keeps its place as the standard single-volume work of reference about Commonwealth universities.

The Association also publishes the report of proceedings of the annual Conferences of the Universities of Great Britain and Northern Ireland, considerable interest being shown in these reports by universities in all parts of the Commonwealth.

Other publications of the Association in the period under review include a new edition of *Higher Education in the United Kingdom* which the Association, in conjunction with the British Council, produces from time to time to meet the needs of overseas students who wish to study in Britain, and annual lists of Postgraduate Awards (fellowships, scholarships, grants, etc., tenable at the United Kingdom universities) which are reprinted from the *Yearbook* in pamphlet form and distributed widely.

In addition to these publishing activities, the office maintains a small reference library containing most of the official publications (Calendars, Handbooks, Reports, Gazettes, etc.) of universities in all Commonwealth countries, together with a small number of other books on university topics. This library has come to be recognized as a central point in London at which such publications may be consulted. There is an increasing demand from various sources, both in the United Kingdom and abroad, for information about Commonwealth universities, which is not fully met by the material contained in the *Yearbook* and the *Handbook*. Consequently the office has to deal with a very considerable number of miscellaneous enquiries from government departments, cultural organizations, university teachers and students. The Secretary has recently adopted the practice of issuing from time to time, with the co-operation of overseas registrars, a list of academic visitors from the Commonwealth known to be visiting or to be about to visit the United Kingdom at a given time, and there is evidence that this information is greatly appreciated by universities and other organizations wishing to make contact with them. Pursuant to the resolutions of the 1948 Congress the Association also issues from time to time an official list of the names and addresses of universities and university colleges of recognized standing throughout the Commonwealth.

MEMBERSHIP OF THE ASSOCIATION

The membership of the Association has risen steadily throughout the quinquennium. In July 1948 there were 57 ordinary members, 13 associate members and 4 additional members; in June 1953, the corresponding figures are 85, 16 and 5.

The increase has been due in part to the establishment of new universities and university colleges in many countries during these years, but also to the apparent desire of old-established institutions to come into the Association, so that practically all university institutions of good standing in the Commonwealth are now members.

The Rt. Hon. Lord Harlech continued in the office of Chairman during 1948–9, but then a change in practice about the Chairmanship was made to enable the chair to be filled by the election of a vice-chancellor or president from the country where the overseas meeting of the Executive Council was being held in the year of office. Professor I. A. Gordon of New Zealand was accordingly Chairman in 1949–50 and Sir A. L. Mudaliar of India in 1950–2. The Vice-Chairmanship has continued to be filled by a representative from the United Kingdom, Sir Raymond Priestley occupying this office in 1948–51 and Sir Philip Morris in 1951–2. For 1952–3, the year of a Congress in the United Kingdom, the Vice-Chairmanship has been held in abeyance and Sir Philip Morris has been elected Chairman of the Association. Sir William Hamilton Fyfe has been Hon. Treasurer throughout the quinquennium.

The Executive Council regrets to record the deaths of the following former members who had been closely associated with the work of the Association and the Universities Bureau: Dr William Cullen, Mr W. B. Brander, Dr E. H. Alton, Dr Ifor L. Evans, Sir James Irvine and Mr R. Littlehailes.

A list of universities and university colleges that have been members at any time in the quinquennium is set out in the Appendix; also the customary list of current and former members of the Executive Council.

P. R. MORRIS, *Chairman*
W. HAMILTON FYFE, *Hon. Treasurer*
J. F. FOSTER, *Secretary*

APPENDIX TO REPORT

MEMBER INSTITUTIONS OF THE ASSOCIATION OF UNIVERSITIES OF THE BRITISH COMMONWEALTH
1948–53

Ordinary Members

ENGLAND AND WALES

Birmingham
Bristol
Cambridge
Durham
Leeds
Liverpool
London
Manchester
Nottingham
Oxford
Reading
Sheffield
Southampton (since 1952)
Wales

SCOTLAND

Aberdeen
Edinburgh
Glasgow
St Andrews

IRELAND

Dublin, Trinity College (1948–9)
National University of Ireland (1948–9)
Queen's, Belfast

CANADA

Acadia (since 1951)
Alberta
British Columbia
Carleton College (since 1952)
Dalhousie
Laval
McGill
McMaster (since 1951)
Manitoba
Montreal (since 1949)
Mt Allison (since 1949)
New Brunswick
Queen's, Ontario
Saskatchewan (since 1951)
Sir George Williams College (since 1952)
St Francis Xavier (since 1950)
Toronto
Western Ontario

AUSTRALIA

Adelaide
Australian National University
Melbourne
New South Wales University of Technology (since 1950)
Queensland
Sydney
Tasmania
Western Australia

NEW ZEALAND

New Zealand

SOUTH AFRICA

Cape Town
Natal (since 1949)
Orange Free State (since 1952)
Potchefstroom (since 1952)
Pretoria (1948–9, rejoined 1952)
Rhodes (since 1951)
South Africa (since 1952)
Stellenbosch (since 1951)
Witwatersrand

APPENDIX I

INDIA

Allahabad (since 1951)
Andhra
Annamalai
Banaras Hindu University (since 1950)
Maharaja Sayajirao University of Baroda (since 1950)
Bombay (since 1950)
Calcutta
Delhi (since 1951)
Lucknow (since 1951)
Madras
Mysore (since 1949)
Nagpur (since 1951)
Osmania
Panjab (India) (since 1950)
Patna
Rajputana (since 1950)
Roorkee (since 1949)
Saugar (since 1952)
Travancore
Utkal (since 1951)

CEYLON

Ceylon

PAKISTAN

Dacca
Karachi (since 1952)
Panjab (Lahore)
Peshawar (since 1951)
Sind (since 1949)

OTHER PARTS OF THE COMMONWEALTH

Hong Kong
Malaya (since 1950)
Malta

Associate Members

University College of the South West, Exeter
University College, Hull
University College, Leicester
University College of North Staffordshire
University College of Southampton (up to 1952)
Canberra University College
University of Otago
Canterbury University College, N.Z.
Auckland University College, N.Z.
Victoria University College, N.Z.
University College of Fort Hare (1953)
Potchefstroom University College (1951–2)
University College of the Gold Coast (since 1949)
University College, Ibadan (since 1949)
Makerere College, the University College of E. Africa (since 1950)
Imperial College of Tropical Agriculture, Trinidad (since 1949)
University College of the West Indies (since 1949)

Additional Members

Municipal College of Technology, Manchester
Royal Technical College, Glasgow
New England University College, Australia (since 1949)
Nova Scotia Technical College, Canada (since 1952)
Royal Military College of Canada (since 1952)

Members of the Executive Council during the Quinquennium 1948–53

Ahmad, Dr Bashir	1952–May 1953
Allen, Sir George	1949–50
Alton, Dr E. H.	1948–49
Alty, Dr T.	1952–53
Appleton, Sir Edward	1948–49
Ashby, Dr Eric	1951–53
Balme, D. M.	1951–52
Bannerjee, Professor B.	1948–49
Bonham-Carter, Gen. Sir Charles	1948–49
de Bunsen, Bernard	1952–53
Caine, Sir Sydney	1952–53
Copland, Sir Douglas	1949–52
Currie, Dr G. A.	1949–53
Davie, Dr T. B.	1949–52
Gilmour, Dr G. P.	1951–53
Gordon, Professor I. A.	1949–52
Greaves, Sir Ewart	1948–49
Haleem, Lt.-Col. A. B. A.	(May) 1953
Harlech, Lord	1948–49
Hetherington, Sir Hector	1949–50
Hossain, Dr S. M.	1949–50
Hytten, Professor T.	1952–53
James, Dr F. Cyril	1948–50
Jennings, Sir Ivor	1950–53
Kazi, I. I.	1950–51
Keir, Sir David Lindsay	1948–49
Logan, Dr D. W.	1948–53
Lowe, Very Rev. Dr J.	1948–51
Mackintosh, Dr W. A.	1952–53
Malherbe, Dr E. G.	1948–52
Malik, Dr O. H.	1948–49
Manché, Dr J. A.	1950–51
Massey, Professor H. S. W.	1948–49
Masson, Sir Irvine	1949–50
Mellanby, Dr K.	1950–51
Morris, Sir Philip	1952–53
Mountford, Sir James	1948–49
Mudaliar, Sir A. L.	1948–53
Nicholson, Rt. Rev. Msgr P. J.	1950–51
Osborn, Professor T. G. B.	1948–49
Priestley, Sir Raymond	1948–49
Raikes, Dr H. R.	1948–49, 1952–53
Raven, Rev. Professor C. E.	1948–49
Ride, Dr Lindsay	1949–50, 1951–52
Roberts, Professor S. H.	1952–53
Sinha, S.	1949–50
Smith, Dr Sidney	1950–52
Taylor, Dr H. M.	1948–49
Taylor, Dr T. M.	1950–51
Taylor, Sir Thomas	1949–50
Timur, M.	1951–52
Vandry, Msgr E.	1948–50
Wallace, Dr R. C.	1948–49
Whitby, Sir Lionel	1951–53
Wolfenden, J. F.	1950–51

A full list of the Executive Council for 1952–53 will be found on p. 296.

COMPARATIVE FINANCIAL TABLES

Note by the Honorary Treasurer

The plans laid down at the last quinquennial Congress opened a new chapter in the activities and therefore also in the account books of the Association. The scope of the Association's work has been widely extended, and the Secretary and his necessarily increased staff have furnished and settled into the new headquarters in Gordon Square. Owing to this considerable development and to the increased cost of many supplies—especially the cost of paper and printing—the annual expenditure of the Association rose from £9979 in 1948–9 to £16,143 last year. For the current year ending 31 July 1953 the estimate of expenditure, which includes the considerable cost of the Congress, is £22,562.

Throughout the quinquennium the income has kept roughly in step with the expenses, thanks to the largely increased number of overseas member universities and to the extra subscriptions paid by the universities of the United Kingdom. The basic subscription for all member universities is £40–120 per annum, according to the number of students. In 1947 the United Kingdom universities voluntarily raised the scale of their contributions to £400–600, and during the present financial year, in which new duties were undertaken for them, they have further increased their subscriptions by 25 per cent. Thus the largest United Kingdom universities pay £750 (instead of £120 or £80) per annum, and the total annual contribution from these members is over £10,000.

The accounts of the Association distinguish (*a*) the general expenses for the work of the whole Association, (*b*) the expense of all work specially done for the United Kingdom universities, which includes the secretarial work of the Committee of Vice-Chancellors and Principals, and (*c*) the cost of the appointments service to overseas universities. This service showed in 1950 a deficit of £2517, which was reduced last year to below £1000; this year it is likely to be about £1600. These deficits have been financed by the surpluses from the subscriptions of the United Kingdom universities, which have also served to keep our capital reserve at about £20,000 and to start a building fund now standing at £7196.

The other annual deficit is on the *Commonwealth Universities Yearbook*. Its issue, which involves a great deal of work throughout the year, is a service of great value to all universities and university colleges. The increase in the number of member universities has increased the size of the volume, and the cost of publication has shown a persistent and distressing increase. This deficit (without

reckoning overhead expense of staff, etc.) has risen from £100 in 1948–9 to £1760 last year. Arrangements have now been made to produce the *Yearbook* without a publisher, a step by which the Executive Council expects to reduce costs.

Throughout the quinquennium there has been each year a surplus of income over expenditure of about £1400 which has now been added to the building fund. For this year in which the Congress has to be paid for there is an estimated deficit of £1281. It seems reasonable to hope that in non-Congress years our small surplus may reappear. But there is no provision in sight for any further development.

For Tables see overleaf.

EXPENDITURE

	1948/49 £	1949/50 £	1950/51 £	1951/52 £	*Estimated 1952/53 £
ADMINISTRATION:					
Salaries and National Insurance	6,415	8,206	8,315	8,975	10,195
Superannuation	435	761	753	817	891
Allowances to retired staff ...	50	50	50	40	25
Stationery and printing (not publications)	345	467	830	957	990
Postage and telegrams	107	387	419	514	569
Telephones	183	124	126	131	174
Hospitality	591	345	399	410	344
Travelling	176	97	40	49	93
Books and newspapers	42	37	38	50	71
Miscellaneous	456	376	282	203	560
Audit fee	26	26	26	26	26
Legal charges	14	37	—	—	12
Bank charges	12	5	11	9	8
Repairs to office furniture and equipment	38	14	41	43	40
Depreciation of office furniture and equipment	106	122	217	222	270
	8,996	11,054	11,547	12,446	14,268
MAINTENANCE OF PREMISES:					
Rent and rates	310	423	722	842	941
Insurance	2	9	12	12	13
Heating and lighting	125	89	100	173	224
Repairs and alterations ...	—	8	1,150	18	240
Caretaker and cleaning ...	196	396	620	670	759
	633	925	2,604	1,715	2,177
PUBLICATIONS:					
Yearbook	100	466	600	1,766	2,811
Conference Reports	202	203	243	195	176
Handbooks	48	—	—	21	—
	350	669	843	1,982	2,987
1953 CONGRESS	—	—	—	—	2,680
Total expenditure	9,979	12,648	14,994	16,143	22,112
Balances, Income over Expenditure	1,420	1,637	1,515	1,493	—
	£11,399	£14,285	£16,509	£17,636	£22,112

• Based on actual accounts for nine months and estimates for final quarter.

LIABILITIES

BALANCE

	1948/49 £	1949/50 £	1950/51 £	1951/52 £	Estimated 1952/53 £
Capital reserve	20,995	18,500	19,500	20,500	21,644
Building fund	—	3,920	5,667	7,330	7,196
Income and Expenditure account	—	1,637	1,515	1,493	—
Special funds	18,431	8,327	7,764	5,298	20,578
Subscriptions in advance	130	109	330	300	10
Creditors	630	1,094	3,209	1,480	7,390
	£40,186	£33,587	£37,985	£36,401	£56,818

INCOME

	1948/49	1949/50	1950/51	1951/52	*Estimated 1952/53
	£	£	£	£	£
SUBSCRIPTIONS:					
United Kingdom	2,875†	1,570	1,650	1,650	1,660
Overseas	1,588	3,243	3,750	4,400	5,090
	4,463	4,813	5,400	6,050	6,750
Donations	—	290	165	165	—
Interest on investments	446	598	552	588	637
Increase in surrender value of policy	45	—	—	—	—
Cecil Peace Prize	10	10	10	10	10
	4,964	5,711	6,127	6,813	7,397
Additional contributions from United Kingdom universities ...	6,435†	7,690	7,610	7,610	10,700
Appointments fees from overseas universities	—	884	2,772	3,213	2,734
Total income	11,399	14,285	16,509	17,636	20,831
Balances, Expenditure over Income	—	—	—	—	1,281
	£11,399	£14,285	£16,509	£17,636	£22,112

• Based on actual accounts for nine months and estimates for final quarter.

† The accounts for 1948–9 show a single sum of £9310 as the total of the contributions of the universities of Great Britain and Ireland, but for comparative purposes this has been divided into the two items shown above, the former representing the amount legally chargeable as their subscriptions at the rates then in force, and the latter the excess contributions voluntarily paid by those universities. At the end of that year the subscription rates of all member institutions were altered, and the figures set out in the other four columns for these items are those for the United Kingdom universities given in the accounts for these succeeding years on the new basis of apportionment.

SHEETS

ASSETS

	1948/49	1949/50	1950/51	1951/52	Estimated 1952/53
	£	£	£	£	£
Furniture and fittings	1,306	1,373	2,413	2,265	2,630
Investments	18,113	19,946	21,596	23,396	24,470
Subscriptions in arrear	200	530	260	110	280
Appts. ledger and exps. recoverable	938	2,612	2,845	3,089	3,000
Sundry debtors	438	1,137	1,242	1,336	1,535
Cash at bank, etc.	19,191	7,989	9,629	6,205	24,903
	£40,186	£33,587	£37,985	£36,401	£56,818

FIVE YEARS' COMPARATIVE ANALYSIS OF INCOME AND EXPENDITURE ACCORDING TO ACTIVITIES OF THE ASSOCIATION

	Income	Expenditure	Surplus	Deficit
General (for all member institutions):				
	£	£	£	£
1948/49	4,964	3,255	1,709	—
1949/50	5,711	4,772	939	—
1950/51	6,127	5,597	530	—
1951/52	6,813	6,712	101	—
Estimated 1952/53 ...	7,397	11,366	—	3,969
Committee of Vice-Chancellors and Principals (for United Kingdom Universities):				
	£	£	£	£
1948/49	6,435	3,801	2,634	—
1949/50	7,690	4,475	3,215	—
1950/51	7,610	5,320	2,290	—
1951/52	7,610	5,220	2,390	—
Estimated 1952/53 ...	10,700	6,376	4,324	—
Appointments Work (for various Overseas Universities):				
	£	£	£	£
1948/49	—	2,923	—	2,923
1949/50	884	3,401	—	2,517
1950/51	2,772	4,077	—	1,305
1951/52	3,213	4,211	—	998
Estimated 1952/53 ...	2,734	4,370	—	1,636

APPENDIX TWO

INTERCHANGE VISITS BETWEEN COMMONWEALTH UNIVERSITIES

A Report by the Committee for Commonwealth University Interchange

Introduction

The Sixth Congress of Commonwealth Universities, held in Oxford in 1948 and attended by 312 representatives of 83 Commonwealth universities, recommended the provision of funds by official bodies ('such as the British Council and the various governments') for the following purposes:

'(*a*) to enable members of teaching staffs on leave to travel within the Commonwealth; and

'(*b*) to facilitate visits of distinguished scholars of one part of the Commonwealth to another.'

The forthcoming Congress, to be held in Cambridge in July 1953, will wish to receive a report on the action taken on this resolution and to consider possible further developments.

2. In order that a start might be made, the Commonwealth Relations Office of the United Kingdom, acting through the British Council, has made available from the inception of the scheme to the end of the financial year 1952–3 sums amounting in all to £30,832, to provide grants towards the cost of travel between the United Kingdom and other Commonwealth countries. To administer these funds a representative Committee has been set up, initially under the chairmanship of Sir Hector Hetherington, Vice-Chancellor and Principal of the University of Glasgow, to whose initiative and leadership the success achieved in the early stages of the scheme was largely due, and later under the chairmanship of Dr C. R. Morris, Vice-Chancellor of the University of Leeds and now Chairman of the Committee of Vice-Chancellors and Principals of the Universities of the United Kingdom. The present membership of the Committee is as follows:

Nominated by the Committee of Vice-Chancellors and Principals of the Universities of the United Kingdom

Dr C. R. Morris, Vice-Chancellor, University of Leeds (*Chairman*).

Dr J. F. Mountford, Vice-Chancellor, University of Liverpool.

Sir David Emrys Evans, Principal, University College of North Wales.

Nominated by the Association of Universities of the British Commonwealth

Sir RAYMOND PRIESTLEY, until recently Vice-Chairman of the Association and Vice-Chancellor, University of Birmingham.

Dr J. F. FOSTER, Secretary of the Association (*Vice-Chairman*).

Dr D. W. LOGAN, Principal, University of London.

Nominated by the Universities Advisory Committee of the British Council

Dr E. ASHBY, Vice-Chancellor, The Queen's University of Belfast.

Professor R. PEERS, Deputy Vice-Chancellor, University of Nottingham.

Dr W. W. GRAVE, Registrary, University of Cambridge.

Secretary: Mr N. S. WHITWORTH, British Council.

3. The Committee decided to offer awards in the form of travel grants to three categories of persons:

Category A: University teachers or officers on recognized study leave;

Category B: Distinguished scholars invited by universities for short visits;

Category C: Postgraduate research workers holding research grants.

A statement showing the awards made in each category to each Commonwealth country, together with the expenditure involved, is given as an appendix [see p. 286]. In all, 194 awards have been made, in which 58 university institutions have participated. Apart from the Colonies, which have not hitherto been included, every Commonwealth country has benefited from the scheme.

4. Of the value of these visits it is primarily for the inviting universities or for the visitors themselves to speak. It is difficult to select examples from the expressions of appreciation received, but perhaps their general trend can best be summarized in the following comment by Dr Currie, recently Chairman of the Committee of Australian Vice-Chancellors and now Vice-Chancellor of the University of New Zealand, relating to a Category B visit:

> 'This visit has been lauded by everyone in the colleges as one of the most stimulating they have ever had....I should like to take this opportunity of saying that as the most remote Dominion the visits of scholars are probably appreciated here as much as anywhere in the world, and even if all cannot be as useful and

> acceptable as this has been there is no question that every visit by a British scholar contributes to the university by the stimulus it gives to the teachers in it. So far as the University of New Zealand is concerned these visits help us continually to match our own scholarship with that of the Mother Country, so that we have a proper template for measuring ourselves and our standards in relation to the British Commonwealth.'

Many similar comments have been received, but the most conclusive evidence of the reality of the need to which the Oxford Congress drew attention is the growth in the number of applications submitted.

5. The increase in the number of applications, however, creates a problem of growing difficulty. For example, while in 1949 it was possible to make awards to 47 out of 81 applicants, in the last series of awards made by the Committee it was possible, owing to limitations of finance, to meet no more than 46 out of 179 requests. Moreover, this could be done only by reducing to the lowest possible limit the number of the valuable—but more costly—visits by scholars of international repute under Category B. While not all applications were equally deserving, and while an element of competition must always be regarded as necessary and salutary, nevertheless the great majority of applicants were undoubtedly well qualified for assistance. Many requests most strongly supported by university authorities could not be met, and there is evidence among the universities anxious to make the fullest use of the scheme of a growing feeling of disappointment which may well imperil its future success.

6. In 1951 His Majesty's Secretary of State for Commonwealth Relations, on receiving the report of the first two years' work, cordially welcomed the progress made, but laid stress on the fact that the resolutions of the Oxford Congress were concerned with promoting travel not only between the United Kingdom and other Commonwealth countries, but also between Commonwealth countries overseas. Moreover, representatives of Colonial university institutions have expressed keen disappointment that, although this is a Commonwealth scheme, its facilities have not been placed at their disposal.

7. From time to time the Committee has been pressed to broaden the scope of the scheme by including a wider range of purposes for which travel grants might be made. No provision is made, for example, for travel for short-period teaching visits, to which reference was made in the Fourth Resolution of the Oxford Congress.

8. It seems clear, therefore, that while a useful pilot experiment has been undertaken and the value of a regular system of interchange visits unquestionably demonstrated, the time has arrived when Commonwealth universities will wish to review the scope and purpose of the interchange scheme and the machinery by which it is administered. Hitherto the travel grants have been financed entirely by the United Kingdom, but members of Commonwealth universities overseas have frequently expressed the view that contributions should be made by other Commonwealth countries. If the scope of the project is to be enlarged, as is clearly desirable, it will be necessary to establish it on a basis of co-operative financial support from all parts of the Commonwealth. To this question the Executive Council of the Association at its meeting in India in January 1952 resolved to ask the forthcoming Congress at Cambridge to direct its attention.

The Contribution of the Universities to Commonwealth Relations

9. If other Commonwealth governments are to be invited to contribute to a scheme for university interchange visits, they may well ask for a fuller indication of some of the ways in which such assistance will benefit the Commonwealth.

(*a*) In the realm of ideas and in the guardianship of standards the universities occupy a special position. Through the universities and those who teach in them, knowledge and an appreciation of these standards are passed on to men and women many of whom will be the leaders of the next generation. To give the university teacher through his personal contacts a keener awareness of the common tradition of British universities, and a livelier sense of the reality of the British Commonwealth of Nations, is a task both important and practicable.

(*b*) The Commonwealth is a unique political experiment in which, despite much that its members have in common, diversity is the most marked characteristic. If it is to endure, mutual understanding of the differences of outlook is of vital importance. In the universities of the Commonwealth, while there are characteristics and traditions in common, each has its own distinctive contribution to make. In every country, under pressure from changing economic and social conditions, new and changing demands are being made upon the universities. The rate of development in one country may be such that the values of tradition are in danger of receiving little attention, while in another affection for established values and methods may obscure the recognition of changing needs. It is

important that a proper balance should be maintained, and to give practical effect to the tradition of a commonwealth of learning and of common purpose in intellectual inquiry, in a community of such diversity as the British Commonwealth, could be of the highest value in our time.

(*c*) From the purely academic point of view, the more frequent meeting of scholar with scholar would further enrich the quality of university teaching and research. Much can be done in cross-fertilizing thought through the printed word and through periodical gatherings of learned societies, but for scholars working in more distant or isolated centres or in the smaller university institutions, the importance of a regular system of personal contacts is clear. The same holds true for all scholars and for all countries, and a university can only fulfil its proper function if it is an active member of a wider association.

(*d*) Colonial university institutions have a significant contribution of their own to make, and in certain fields provide exceptional opportunities for research. In Colonial territories where self-governing institutions are in process of development, university bodies are being established in order to train men and women for the professional and administrative services necessary to self-government. For some time to come teachers and scholars from within these countries, must necessarily be too few for the needs of the new institutions, and any help that can be given by means of visits from experienced university teachers from other parts of the Commonwealth will be of special importance.

(*e*) Migration within the Commonwealth is often hindered through lack of reliable guidance about conditions in other Commonwealth countries from those with first-hand experience. More frequent visits by university teachers and young research workers is one method by which such knowledge can be more widely spread.

(*f*) The possibility of personal contact depends upon time and money. The speed of air transport has already dramatically reduced the time factor; today it takes no longer to travel from London to Sydney than it took to go from London to Edinburgh at the beginning of the nineteenth century. It is too early to assess the full implications of this development, but it is clear that the physical obstacles which have hitherto hindered the growth of academic unity in the Commonwealth have been largely removed. The financial obstacles, however, remain, and it is the purpose of the interchange scheme as far as possible to overcome them.

The Future of the Scheme

10. If university interchange within the Commonwealth is to be developed as experience has shown to be desirable, and if it is to be based on a firmer financial foundation, an estimate must be made of the needs which are likely to arise within the next five years.

11. It has already been pointed out that the intentions of the present scheme have not yet been fully realized. Over the whole period the Committee has been able to meet only 39 per cent of the applications, and during the last year the proportion of successful applications fell to 25·7 per cent. While the need for further developments becomes increasingly apparent, the claim of the existing services must remain a prime consideration.

12. It is clear that provision should now be made for visits between Commonwealth countries overseas. The steady development in the demand in United Kingdom universities for assistance with visits to other Commonwealth countries, and in the invitations extended to leading scholars from those countries, underlines the fact that important new work is being undertaken in the university departments of many Commonwealth countries with which scholars in all these countries will wish to make contact. It would not, however, be right for the United Kingdom taxpayer to bear the cost of visits between one overseas country and another, and if a general interchange scheme between all Commonwealth countries is to be brought into being, it will be necessary for these countries to make a financial contribution towards its cost.

13. The inclusion of Colonial university institutions in the scheme is unquestionably desirable. While it is true that some of these institutions are able to make generous provision for members of their staffs to visit the United Kingdom, others cannot do so, and there is a general dearth of resources for invitations of the Category B type. Moreover, there may well be a desire on both sides for more frequent contacts between Colonial university institutions and Commonwealth countries other than the United Kingdom.

14. An interesting new proposal is the suggestion put forward by certain leading university representatives in Canada and in Australia that travel grants should be provided to permit more short-period teaching engagements, whether or not arranged on an exchange basis. For an appointment of a year or more it has long been customary for the employing university to meet the cost of travel. This expense, however, may be a major obstacle to the appointment

for a shorter period of a distinguished visiting lecturer. A senior scholar cannot easily leave his department for a long period, but he can sometimes arrange his work in such a way as to make possible an absence of some weeks, particularly if the university terms do not coincide. The enrichment of university teaching and research which must result from visits of this kind is obvious. While the visits would normally be for teaching purposes, the object might be to obtain expert advice on the reorganization or re-equipment of a department or on the establishment of a new department in a previously undeveloped field of studies. Consultations of this nature did in fact take place during the visits of the Executive Council of the Association to New Zealand in 1950 and to India in the winter of 1951–2. The existence of the Fulbright and allied schemes have made possible many such visits by American professors which have been greatly appreciated. There should be similar opportunities within the Commonwealth for the interchange of Commonwealth scholars, and the provision of travel grants, together with the steps recommended in the Fourth Resolution of the Oxford Congress, would go far to meet the need.

15. Within the existing categories of award certain modifications seem desirable. In Category A the Committee has had in mind the normal year of sabbatical leave, and has required that candidates must spend at least six months in the country visited. It has become clear, however, that there is a widespread demand for travel grants for visits covering one term and a vacation from candidates whose responsibilities preclude the possibility of the longer visit. It is suggested that in special cases the minimum requirement for a travel grant should be one term's leave of absence.

16. The application under Category C—from the young research worker holding a research grant or post—has from the outset been regarded as the lowest in order of priority, and it has never been possible to make an adequate number of travel grants in this category. While in the Committee's view priority should continue to be given to other services, the Category C grants meet a real need, more particularly in enabling holders of research scholarships normally tenable in the home country to make use of these awards elsewhere in the Commonwealth.

17. Other suggestions for the improvement of the scheme may well be made, but it will be clear from the foregoing that there is ample room for experiment and that much more remains to be done before the aims formulated by the Oxford Congress are achieved.

Finance

18. The present financial provision is inadequate to cope with the potential demand in the existing categories and within the present territorial limitations. The existence of the scheme is not yet appreciated in all university departments, and the full possibilities of Category B visits, for example, have still to be explored. Under a somewhat similar—although for obvious reasons less costly—scheme for interchange of distinguished scholars between United Kingdom and foreign universities, in which costs are equally shared between the participating countries, a total of 100 visits are arranged each year. Under the Commonwealth scheme, however, for all universities it has been possible in this last year to provide travel grants for only six Category B visits by United Kingdom and Commonwealth scholars.

19. The Committee suggests that if the scope of the scheme is to be expanded on the lines proposed, an annual total expenditure of the order of £50,000 would ultimately be required. It may not be practicable to achieve this aim in the near future, but it is felt that a minimum annual sum of £25,000 would be needed to make a satisfactory start. To provide the necessary resources, however, it will be essential to seek the co-operation of Commonwealth governments overseas, including where possible governments of Colonial territories which possess university institutions. It is to be hoped that the United Kingdom will continue to make a substantial contribution to the scheme, which would be sufficient to guarantee to each contributing government that awards to the value of at least its own contribution would be made in respect of visits to or from that country.

20. It would be essential, in view of the long-term planning required, that funds should be guaranteed for something like a five-year period, for which there is the precedent of the practice of the University Grants Committee in the United Kingdom. Moreover, as academic years within the Commonwealth do not usually coincide with governmental financial years, and as it is seldom possible to forecast precisely when within the academic year a particular visit will take place, it would be necessary to allow money unspent in one financial year to be carried over to the next, subject to the rendering of an account showing any unspent balances at the end of the quinquennial period.

Administration

21. The administration of a Commonwealth scheme presents particular problems. If the Commonwealth governments contribute to the project, the overseas universities should clearly have a larger share than at present in the making of awards. It is important, however, that the scheme should be maintained as a unified project for the whole Commonwealth.

22. The Committee considers that there are three possible methods of administration, none of them entirely free from difficulties, and it would be for the Congress to make its recommendations. The three possibilities are as follows:

(*a*) Complete centralization—as at present, the scheme being administered entirely by a committee in London;

(*b*) Complete decentralization—each Commonwealth country administering its own contribution in its own way;

(*c*) Financial centralization, but with a strong element of decentralization in the making of the awards.

23. The Committee does not favour the first of these possibilities, which fails to make the fullest use of local knowledge. While awards have hitherto been made largely on the recommendations of the Vice-Chancellor of the candidate's university, it has not been easy in every case to assess correctly what are necessarily brief comments. The task of selection is inevitably difficult, but it would be simplified if to a large degree it could be undertaken in the country from which the applications are submitted. The Committee has already received the suggestion from Australia that, in one of the categories, applications should first be co-ordinated by the Australian Vice-Chancellors' Committee. This is a valuable suggestion, the principle of which might well be extended.

24. The second possibility is complete decentralization, each Commonwealth country administering its own grant in its own way. This at first sight would seem to be the simplest and the most obvious solution, but the more its implications are examined, the greater are the difficulties which emerge. It would, the Committee feels, be extremely difficult for the scheme to be operated in any sense as a unified Commonwealth project. Conditions of award would in time be bound to vary in each country; in so far as the schemes adopted provided for reciprocal exchange, it might well prove necessary for each Commonwealth country to negotiate separately

with each of the others; and if the grant were to become merely a local fund to finance Commonwealth travel or invitations to Commonwealth guests, it would be difficult to avoid the pressure which might arise to use the fund for general foreign travel. Other Commonwealth countries, moreover, would be debarred from benefiting from that larger contribution to the common pool which the United Kingdom, in view of its special position, might reasonably be expected to make.

25. The third possibility, which seems to the Committee the most satisfactory solution, would be financial centralization with a strong element of decentralization in the making of the awards. This solution would probably necessitate some such arrangements as the following:

(*a*) The establishment of a central fund to which Commonwealth governments would contribute, and the setting up of an independent Trust to administer this fund;

(*b*) The setting up of a general council for the Trust, composed of representatives of all participating governments, meeting perhaps once a year to receive a report and an audited financial statement, as well as to review general policy;

(*c*) The appointment of an executive committee of an academic character, which might be formed of representatives nominated by the following bodies:

(i) The Association of Universities of the British Commonwealth	(3)
(ii) The Inter-University Council for Higher Education in the Colonies	(1)
(iii) The Committee of Vice-Chancellors and Principals of the Universities of the United Kingdom ...	(2)
(iv) The Universities Advisory Committee of the British Council	(2)
(v) Two persons from Commonwealth universities overseas who are in the United Kingdom at the time when the awards are made, to be nominated each year at the principal executive council meeting of the Association of Universities of the British Commonwealth	(2)

This committee would be responsible for formulating detailed conditions and for making the final awards.

(*d*) The recognition, or establishment, in each Commonwealth country possessing more than one university, of a committee (e.g. the Committee of Vice-Chancellors) which would in the first instance receive all applications for grants, and would forward them to the Trust together with comments and recommendations. This committee would also co-ordinate applications for Category B visits and would be entitled both to comment on the working of the scheme and to put forward suggestions for its development.

26. With machinery such as this the Committee believes that it would be possible to maintain a unified scheme for Commonwealth university interchange, and at the same time to give a large element of control to universities throughout the Commonwealth. The new Trust must obviously be an independent body, responsible through its Council to the Commonwealth as a whole, and it would doubtless wish to appoint its own director or secretary; but it might well find it economical and convenient to enter into some arrangement with the British Council or the Association of Universities of the British Commonwealth for the use of certain administrative services, and thus preserve a co-operation which has proved so fruitful in the past.

27. It is assumed that universities will not make any formal approach to their governments before the Cambridge Congress. Such formal approaches would have to be made in due course, but they might well be more effective if the proposed scheme proves to have the weight of a Congress decision behind it.

28. This paper has been concerned largely with gaps and deficiences which remain to be filled in the Commonwealth interchange scheme, but the members of the Committee wish to record their unanimous belief that, in the words of Sir Hector Hetherington, an important pioneer project has been most successfully launched, and that the thanks of the Congress are especially due to the British Council which has made this development possible.

On behalf of the Committee for
Commonwealth University Interchange
C. R. MORRIS (*Chairman*)

October 1952

For Appendix to Report see overleaf.

APPENDIX TO REPORT

COMMONWEALTH UNIVERSITY INTERCHANGE SCHEME

Tables showing Number and Cost of Category A, B and C Awards from the Commencement of the Scheme to 30 June 1952

I. DISTRIBUTION BY UNIVERSITIES

University	Categories of award: A — University teachers or officers on recognized study leave	B — Distinguished scholars invited by universities for short visits (listed according to inviting universities)	C — Postgraduate university research workers holding research grants	Total
UNITED KINGDOM				
Birmingham	1	2	—	3
Cambridge	2	—	2	4
Durham	1	—	1	2
Leeds	—	2	—	2
London	2	4	—	6
Manchester	—	—	1	1
Oxford	1	1	2	4
University College of Wales, Aberystwyth	1	—	—	1
University College of South Wales and Monmouthshire, Cardiff	1	—	—	1
Edinburgh	—	—	1	1
Glasgow	—	—	2	2
The Queen's University, Belfast	—	1	—	1
CANADA				
Alberta	1	—	1	2
British Columbia	—	3	1	4
Dalhousie	—	1	—	1
McGill	—	1	2	3
New Brunswick	1	—	—	1
Queen's	1	—	—	1
Toronto	1	2	—	3
Western Ontario	2	—	—	2
AUSTRALIA				
Adelaide	2	—	—	2
Melbourne	10	3	10	23
Queensland	2	—	2	4
Sydney	7	2	4	13
New England University College, University of Sydney	1	—	1	2

University	Categories of award: A — University teachers or officers on recognized study leave	B — Distinguished scholars invited by universities for short visits (listed according to inviting universities)	C — Postgraduate university research workers holding research grants	Total
AUSTRALIA (*cont.*)				
Tasmania	4	—	—	4
Western Australia	4	—	1	5
NEW ZEALAND				
University of New Zealand	—	2	—	2
Otago	1	—	1	2
Canterbury University College	—	—	3	3
Auckland University College	9	—	3	12
Victoria University College	1	—	3	4
Massey Agricultural College	—	—	1	1
SOUTH AFRICA				
Cape Town	5	—	—	5
Natal	5	3	1	9
Potchefstroom	1	—	1	2
Pretoria	3	—	—	3
Rhodes	3	3	1	7
Stellenbosch	1	—	1	2
Witwatersrand	4	—	1	5
INDIA				
Agra	2	—	1	3
Aligarh Muslim	—	—	1	1
Allahabad	1	—	—	1
Banaras Hindu	3	—	1	4
Bombay	2	—	—	2
Delhi	1	1	1	3
Lucknow	4	—	—	4
Madras	1	—	—	1
Mysore	1	—	1	2
Nagpur	1	—	—	1
Rajputana	3	—	—	3
Roorkee	—	—	1	1
Saugar	—	—	2	2
Indian Institute of Science, Bangalore	1	—	—	1
CEYLON				
Ceylon	1	—	—	1
PAKISTAN				
Dacca	—	—	6	6
Panjab	1	—	1	2
Sind	—	—	1	1
Totals	100	31	63	194

APPENDIX II

II. DISTRIBUTION BY COUNTRIES

Country	Categories of award A: University teachers or officers on recognized study leave	B: Distinguished scholars invited by universities for short visits (listed according to inviting universities)	C: Postgraduate university research workers holding research grants	Total
United Kingdom	9	10	9	28
Canada	6	7	4	17
Australia	30	5	18	53
New Zealand	11	2	11	24
South Africa	22	6	5	33
India	20	1	8	29
Ceylon	1	—	—	1
Pakistan	1	—	8	9
Totals	100	31	63	194

III. COST OF AWARDS

Country receiving award	Total £
United Kingdom	5,015
Canada	2,992
Australia	8,507
New Zealand	5,563
South Africa	4,150
India	3,965
Ceylon	170
Pakistan	1,250
Total	£31,612

(*Note.* These figures include commitments for return journeys which will be financed from future allocations.)

APPENDIX THREE

THE EFFECT OF SUPERANNUATION SCHEMES ON MOBILITY OF ACADEMIC STAFF WITHIN THE COMMONWEALTH

Note by the Principal of the University of London

At the 1948 Congress, the following draft Resolution submitted by the meeting of Executive Heads of Universities held at Bristol on 13–17 July was endorsed by the full Conference (Record pp. 66, 71, 75–6 and 90):

> 'Wherever possible the superannuation scheme of a university should be such as to encourage or facilitate easy interchange between the universities of the Commonwealth. Where there is no scheme at all the benefits of contributions should be made transferable in individual cases under any new proposal.'

The matter was further discussed at the meeting of the Executive Council in New Zealand in 1950 (Minutes, p. 13) which resolved (*inter alia*):

> 'That a report on existing practice regarding superannuation and insurance for the universities be prepared for each country for submission to members of the Executive Council.'

A fairly comprehensive report on the Canadian situation had already been submitted to the 25th meeting of the National Conference of Canadian Universities in June 1949 by Mr William Bentley, and Mr A. J. Ford, the Secretary of the Australian Vice-Chancellors' Committee, has since drawn up a detailed survey of the position in Australia. Details have also been received of the pension position in other parts of the Commonwealth.

The discussions in 1948 left me with the definite impression that the aim to be pursued was the introduction throughout the universities of the Commonwealth of a uniform pension scheme, based on the principles of the F.S.S.U. Under this scheme, which operates in the United Kingdom, the member of staff contributes 5 per cent of his salary and the employing institution a further 10 per cent. The sum so available is used to purchase with approved companies a policy or policies which can take the form of either a deferred annuity or an endowment assurance. I need not explain the meaning of these two phrases, though it may be convenient to point out that

the endowment assurance option enables a married man to provide against the possibility of his death before retiring age as well as dealing with the problem of his pension. Neither the endowment policy nor the deferred annuity deals with the problem of premature retirement on the grounds of ill-health. On transfer to another university, the person concerned takes with him his full accrued pension rights, including the employer's contribution. This was one of the great distinctions between the F.S.S.U. when it was introduced in 1919 and the then Civil Service Scheme under which the Civil Servant paid no contribution but had no claim to a pension if he left the Civil Service before the normal age of retirement.

I would like at this stage to make two comments.

(1) In the first place, I very much doubt whether a uniform superannuation scheme for all universities of the Commonwealth is either feasible or desirable. The relationship of a university to the other educational institutions in a country is a matter which permits of no easy generalizations. In one sense, a university knows no national barriers; in another sense, it forms part of the apex of the domestic educational system. When one looks at the proportion of university teachers who are locally recruited, then, passionate as one ought to be for Commonwealth interchange, the fact remains that the universities of the Commonwealth cannot readily dissociate themselves from their related educational institutions, whether it be in the question of superannuation or in other matters.

(2) Secondly, it has become increasingly clear that the F.S.S.U. has even greater disadvantages in a period of inflation than had been appreciated in 1948, and all British universities have been forced since the war to introduce some scheme to supplement the pensions payable under the F.S.S.U. The British Treasury has taken two important decisions in the past year on this subject:

(*a*) Until the end of 1952, members of the Scientific, Economic and Statistical Branches of the Civil Service were pensionable under the F.S.S.U. so as to promote ready interchange between the Service and universities. Persons joining those branches of the Civil Service on and after 1 January 1953 are pensionable under the normal Civil Service Scheme.

(*b*) Special grants are to be made available in 1955 and thereafter for supplementing the pensions under the F.S.S.U. of persons who retire from the service of universities after the introduction of the new scheme of supplementation.

I think, therefore, it is necessary to discard any idea of a uniform pension scheme for all universities of the Commonwealth and to

make a different approach to the problem of adapting pension rights so as to promote interchangeability. In this connexion, it is interesting to recall the resolution (No. 71(2)) of the Empire Scientific Official Conference of 1946 on the subject:

> 'The Conference notes that this purpose [interchangeability] and other advantages are achieved by the F.S.S.U. scheme now operating for the staffs of Universities in the United Kingdom and for the scientific staffs in the United Kingdom Civil Service, and recommends the adoption throughout the Commonwealth, of a scheme or schemes with superannuation benefits not less favourable than those of F.S.S.U.'

The British Commonwealth Scientific Conference of 1952, however, had second thoughts:

> 'The main difficulty which arises, particularly in the case of more senior people, is the transfer of pension rights. As a means of overcoming this, the 1946 Conference suggested the adoption throughout the Commonwealth of a general scheme of superannuation benefits possessing the advantages of the Federated Superannuation System for Universities (F.S.S.U.). Progress towards this has been slow, chiefly because of the legal and monetary difficulties involved in transfer of F.S.S.U. rights between countries. The Committee notes, however, that in many cases the loss of pension rights has been avoided by appropriate action between the old and new employing institutions so that the absence of a uniform scheme has not necessarily hampered the transfer of scientists. For these reasons and because the decrease in the value of money since 1946 has made F.S.S.U. schemes less attractive, the Committee is not disposed to recommend the reaffirmation of the resolutions of the 1946 Conference relating to F.S.S.U. schemes. The Committee, however, recommends the adoption by the Conference of the following resolution:
>
> 'In order to facilitate the movement of scientists the Conference requests all superannuation and pension authorities to consider making provision in their schemes so that an officer appointed to the staff of another institution shall have secured to him by the scheme under which he has been serving, the full actuarial benefits which have accrued to him during his service, under that scheme, prior to transfer.'

The change of attitude is of vital importance, and the reasons for it can be illustrated by what has happened in the United Kingdom since the war. There has been, as a result of the policy of nationalization, a great extension of the public service in many directions and

the question of pension rights has inevitably received much attention. Before the war, an employee who voluntarily left the Civil Service or Local Government Service before the normal age of retirement forfeited, in most cases, all claim to a pension, apart from any personal contributions he might have made. But those in charge of the post-war developments were far-sighted enough to realize that such a policy would be fatal in an era when movement between various branches of the public service (in the broadest sense of that term) is clearly desirable—and, indeed, essential.

The idea of pension transfer in the United Kingdom can be traced back to 1922 when partial provision was made for transfers between one local authority and another under the Local Government and Other Officers' Superannuation Act of that year. Arrangements were made under the Superannuation Act, 1936, to enable persons to transfer between the Civil Service and Local Government Service, or vice versa, without losing pension rights but the pension obtained was not as good as if the employee had remained in one service only.

Gradually, since the war, a number of Statutes and Statutory Instruments have been made to enable employees in the various public services to transfer to another form of approved service without forfeiting the benefit of the accrued pension payments of the employing institutions. This transfer can be achieved in three different ways:

1. The first employer can undertake to pay the employee a pension in respect of his years of service with it when the employee reaches the appropriate retiring age in the new occupation;

e.g., before 1950, if a Local Government officer moved to the Civil Service, under the Local Government and Civil Service (Superannuation Rules) 1936 [S.O. 651], the local authority undertook to pay the officer, on his retirement from the Civil Service, a pension in respect of his years of Local Government Service.

2. The first employer can pay to the second employer the agreed transfer value of the accrued pension rights, leaving the second employer to make the necessary arrangements to give the employee the appropriate status in its own pension scheme;

e.g., under Rule 5 of the Superannuation (Policy and Local Government Schemes) Interchange Rules, 1948 [S.I. 1446], if a Local Government officer moves to university service and joins the F.S.S.U., the local authority may pay an agreed transfer value of the accrued pension rights to the university which has to expend the money in taking out a deferred annuity which is subject to ordinary F.S.S.U. rules.

3. On a 'knock for knock' basis, the second employer can undertake to credit the transferred employee in full with the years of service with the first employer in reckoning his pension under its own scheme;

e.g., under the National Health Service (Superannuation) Regulations 1950 [S.I. 497], the Civil Service counts years in the National Health Service as equivalent to years in the service of the Crown for the purpose of calculating pensions and vice versa.

Thus arrangements of one of these three kinds enable persons in the United Kingdom to move fairly freely between the Civil Service, the National Health Service, Local Government Service, the Teaching Service, service in some of the public and nationalized corporations and universities without any significant loss of accrued pension rights.

Interavailability of pension rights does not necessarily presuppose a contributory pension scheme; for example, the British Civil Service Scheme is non-contributory and yet benefits under it are, in certain cases, transferable. It seems to me clear, however, that the tendency will be more for pension schemes to be on a contributory basis.

If a pension scheme is on a contributory basis, an employee must, on leaving his post, be entitled to take with him his own contributions plus some form of interest. The crux of the matter is whether he should be entitled to take the employer's contributions. This is a profound social problem to which, in my opinion, there can be only one answer. I need not refer in detail to the statistics which prove so clearly that the percentage of the total population which exceeds the age of sixty-five, the normal retiring age in universities, is increasing year by year, but the following table sets out the position for England and Wales in the past half-century:

Number of persons per 10,000 *of the Population in England and Wales in the Age Group* 65 *and over*

1901	1911	1921	1931	1939	1946	1947	1950
467	521	605	742	897	1040	1051	1087

It is, I think, fair to assume that the vast majority of persons who retire at the age of 65 rely for their subsistence on pensions earned in the course of their working life. Moreover, though the British National Insurance Scheme now provides all types of employees with a pension on retirement, the amount payable is not sufficient to maintain a professional man in conditions even remotely resembling those under which he lives during his working life. In the conditions prevailing today with regard to taxation, certainly in this country, a professional man finds it difficult, if not impossible, to make

adequate provision for his old age out of taxed income and membership of some kind of pension scheme, other than the National Insurance Scheme, during the whole of his working life is rapidly becoming essential.

The situation may therefore be summed up in this way. The percentage of people reaching the age of 65, the normal age of retirement in universities, has more than doubled in the past half-century and is still increasing. Moreover, the expectation of life at 65 is slowly increasing so that the period for which pension provision has to be made is gradually growing longer. At the same time, economic circumstances make it almost impossible for a professional man to provide an adequate pension from savings. The responsibility, therefore, for his maintenance in retirement falls increasingly on the superannuation scheme associated with the form of employment in which he spends his effective working life. It follows, I think, that remuneration during working life should include appropriate annual provision for retirement pensions, which, in a sense, are deferred pay. Any employer who pays remuneration which does not include such provision is not paying the full rate for the job.

The conclusion which I draw is that, in general, an employer in present conditions is under an obligation to provide some form of superannuation scheme for his employees; further, that if an employee leaves before reaching the age of retirement, the employer is under a moral obligation to allow the employee to take with him the full pension provision which has accrued during his period of service.

The superannuation problem in universities is, inevitably, only part of a wider problem. The National Federation of Professional Workers, for example, passed the following resolution at its 1952 Conference:

> 'That the Federation ask the Government to consider the question of pension provisions in industry, particularly to ensure that people changing their jobs should not lose pension rights.'

The resolution was forwarded to the Minister of Labour and National Service from whom the following reply was received:

> 'The effects of pension schemes on employment are being studied from a number of angles and by several departments, including the Ministry of Labour and National Service. In particular, this department is interested in all measures to make interchangeability of employment less difficult, including the retention of pension rights when jobs are changed. A number of enquiries are being made and when more information is available, the practical steps which may be taken will be considered.'

In the statement of the policy of the Labour Party issued last month under the title of 'Challenge to Britain' the following statement appears:

> 'There is a major defect, too, in the private organization of superannuation schemes. Since these are not normally transferable, they discourage movement from one job to another. It is in the interests of the nation that people should be able to move freely to other jobs.
>
> Labour believes that [this problem]...should be the subject of a special examination. This should be carried out at the same time as the 1954 review of the National Insurance Scheme.'

The movement has extended to reciprocal agreements on transfers of rights under State Social Security Schemes: for example, an agreement was signed last month between the United Kingdom and Australia granting a certain measure of reciprocity so that persons going to the United Kingdom from Australia (and vice versa) would be treated as though they had been insured under the British National Insurance Scheme during the period of their stay in Australia (*The Times*, 9 June 1953). Comparable agreements are in force with Northern Ireland, Eire, the Isle of Man, France, Italy and Switzerland and discussions are now taking place with New Zealand and a number of European countries.

I therefore suggest that the solution to the problem of pensions in relation to interchangeability of staff between universities of the Commonwealth does not lie in the adoption of a uniform scheme by universities of the Commonwealth on the model of the F.S.S.U. Rather it lies in taking steps to see that, if a person leaves the service of any university before reaching the normal age of retirement, it is recognized that he is entitled to carry with him the complete pension rights which accrue up to the date of his resignation, including the benefits of the contributions of the employing Institution—or, if the pension scheme be non-contributory, a lump sum representing the value of his pension expectation to the date of transfer. If this principle can be established, a great advance will have been made though many thorny problems will remain to be settled. Outstanding among these difficulties are the question of settling transfer values where the pension scheme is not based on the taking out of an insurance policy and the question of admitting the university teacher to his proper place in the pension scheme of the university to which he is transferring.

D. W. LOGAN

1 *July* 1953

THE EXECUTIVE COUNCIL

OF THE ASSOCIATION OF UNIVERSITIES OF THE BRITISH COMMONWEALTH

1952–1953

Members of Council elected to represent the member Universities in

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Dr D. W. LOGAN, M.A., D.PHIL., D.C.L. (London)	—
Sir PHILIP MORRIS, C.B.E., M.A., LL.D. (Bristol)	—
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